294598 ☆

EX·LIBRIS·COLL·MED·PHILAD·INSTIT·A·D·MDCCLXXXVII

NON SIBI SED TOTI

Class Journal No

GIFT

L[illegible] THE
[illegible]SICIANS

Digitized by the Internet Archive
in 2016 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/missourimedicine7619miss

Missouri Medicine

Vol. 76, No. 1 January, 1979

MDS

Special!

A Prescription for Ailing Medical Education in America

A. Bernard Ackerman, M.D.
New York, N. Y.

Meet Our Contributing Editors, Publication Committee and Editorial Board

LIBRARY OF
…SICIANS
OF PHILADELPHIA
FEB 2 - 1979

1979 Annual Session Preliminary Program

Tonsillectomy
Is It Necessary?

Pelvic Lymphadenectomy in Prostatic Cancer

Contents
Page 6

MISSOURI STATE MEDICAL ASSOCIATION

MOMEDICO

YOUR PROFESSIONAL LIABILITY
INSURANCE COMPANY

prescription
for protection!

Who knows the needs of a physician better than his peers? That's why MOMEDICO was formed **by** doctors **for** doctors.

MOMEDICO is owned by the Missouri State Medical Association and is a **stock** insurance company licensed and regulated under the laws applicable to insurance companies in the State of Missouri. MOMEDICO was formed to provide physician professional liability insurance to MSMA members at a reasonable price.

missouri medical insurance company
100 North Broadway
St. Louis, Missouri 63102

314-241-4774

COMPARE

MOMEDICO

Writes
- **occurrence form**

Professional liability insurance

Is adequately capitalized and
- **financially strong**

Purchase all
- **domestic reinsurance**

for protection

Is a
- **stock insurance company** domiciled in Missouri

Is
- **not assessable**

Has
- **no deductible** for claims

Provides
- **adequate limits**

Offers
- **premises liability**

Includes
- **personal injury coverage**
- May refund premiums with favorable underwriting experience

Second-class postage paid at Jefferson City, Mo., and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison St., Jefferson City, Mo. 65102. Subscription Price: $15.00 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

LIBRARIAN — RETAIN LAST COPY

HEADACHES
SWEATS
TENSE, TAUT MUSCLES
HYPERVENTILATION
TACHYCARDIA
PALPITATIONS
BURNING IN STOMACH
FULLNESS
FREQUENCY
to relieve psychic tension and its functional symptoms
VALIUM®
(diazepam) Ⓒ
2-mg, 5-mg, 10-mg scored tablets

VALIUM®(diazepam)

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome, convulsive disorders (not for sole therapy).
The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence
***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

your help is needed by Missouri's future practicing physicians!

The Missouri State Medical Foundation (MSMF) was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

As other loan sources are becoming less available, the Foundation is growing into one of the major sources of loans for aspiring physicians. Send your check today!

Give now to the

MISSOURI STATE MEDICAL FOUNDATION

MISSOURI STATE MEDICAL FOUNDATION

SPONSORED BY THE
MISSOURI STATE MEDICAL ASSOCIATION
113 Madison St., Jefferson City, Mo. 65102

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 509(a)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

Tenuate® ©IV
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary
INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.
CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).
WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. *Drug Dependence* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy*: Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children*: Tenuate is not recommended for use in children under 12 years of age.
PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.
ADVERSE REACTIONS: *Cardiovascular*: Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System*: Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal*: Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic*: Urticaria, rash, ecchymosis, erythema. *Endocrine*: Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System*: Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous*: A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.
DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.
OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633
Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request — Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

8-3921 (Y587A)

Whether overweight is a complicating factor... or just uncomplicated overweight.

Tenuate® Dospan® Ⓒ-IV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

Merrell

For prescribing information see opposite page

EMPIRIN® COMPOUND
c̄ CODEINE

Each tablet contains: aspirin 227 mg; phenacetin, 162 mg, and caffeine, 32 mg; plus codeine phosphate in one of the following strengths: #4—60 mg (gr 1), #3—30 mg (gr ½); #2—15 mg (gr ¼); and #1—7.5 mg (gr ⅛). (Warning—may be habit forming). CIII

Wellcome | Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

MSMA

NEWS ROUND - UP

January, 1979

MSMA earmarks 124 medical bills

When the 1979 Missouri General Assembly opened January 3, the Missouri State Medical Association earmarked 124 bills which are medically-related and must be followed to some degree. The MSMA Committee on Legislative Affairs has placed these bills in "categories of importance" which determine the scope of MSMA involvement in each bill.

Again this Session, the MSMA will seek additional funding for physician services under the Medicaid Program. The Association will again attempt to convince both the Administration and the Legislature that Missouri physicians are hurting financially because of inadequate payments by Medicaid.

Several of the new bills this year concern the allied health fields. Senate Bill 329 provides for payment of nurse practitioners and physician's assistants services in rural health clinics. House Bill 257 would license physician's assistants. SB 207 provides for licensing of Home Health Care Services.

In addition, there are again several other allied health professions with licensing bills. These include Radiologic Technicians, Social Workers, Occupational Therapists and Assistants, Mental Health Technicians and Athletic Trainers.

Along with the bill that would allow payment of N.P.'s and P.A.'s under Medicaid, others would allow payment for oxygen, abortions (in certain cases), surgicenters, hearing aid fitter services, day treatment and chiropractors.

Other new bills of interest to medicine include: HB 260, which allows examination of physicians' Medicaid records (no patient consent indicated); HB 221, which would establish a "providers Roundtable Advisory Board to the Division of Family Services" with more power than the present Board; SB 58, which establishes a separate Department of Health; SB 88, which allows physicians practicing in Missouri to sit on professional liability panels; and HB 220, which provides the Division of Insurance with some authority over HMO's.

The following bills are of primary importance to medicine: SB 287, Chiropractic-Adjunctive therapy (Another would permit the use of Chiropractic "Physician."); SB 52, Certificate-of-Need; SB 293, which would establish a system of Family Practice Residencies; SB 178, which allows Medicaid providers to gain hearings in cases of denial or reduction over $100;

SB 57, which allows physicians to prescribe the same drugs to Medicaid patients as to private patients; SB 334, adds a public member to the Board of Healing Arts; SB 212, which rewrites the statutes to authorize the Board of Healing Arts to give FLEX, which the Board already does; SB 241, which rewrites a portion of the Practice Act to differentiate between physician advertising and solicitation;

HB 453, a Hospital Cost Containment bill which places strict limits on hospitals; SB 73, which allows admission of collateral source evidence in professional liability cases; SB 278, which would make insurance companies offer parity coverage for mental illness in policies;

HB 438, a definition of death bill drawn up with the assistance of Catholic Conference; HB 439, Right-to-Die (Some hospitals stated they need such legislative authority in Code Blue situations); HB 354 would authorize the sale, use and manufacture of Laetrile in Missouri; SB 330, allows removal of corneal tissue by medical examiners; and SB 219, which would remove exemptions and make "Blues" regular health insurance companies.

MSMA
Committee on the Impaired Physician
Confidential 24-hour
Recorded Message Telephone Number
314-636-5744

New prescription forms now required by law

Remember, the law regarding generic substitution went into effect January 1, 1979, and this law requires a new prescription form.

According to the new law, a prescription is not valid unless the prescription form has two signature lines at opposite ends at the bottom of the form. The words, "Dispense as Written," must be printed under the line on the right side of the form and "Substitution Permitted" must be printed under the line on the left side.

If the physician signs on the right, a pharmacist cannot substitute a generic drug for the brand name requested. However, if the form is signed on the left, the pharmacist is permitted to substitute a less expensive generically equivalent product.

When prescribing orally, the physician is required to instruct the pharmacist as to whether substitution is allowed. The pharmacist must enter oral instruction on the file copy of the prescription.

294.98
OCT 1 3 1980

Council approves formation of new component societies

Several new component medical societies are being formed in Missouri in an effort to increase local participation in these societies.

During the December 16 meeting in Jefferson City, the MSMA Council approved the Constitution & Bylaws submitted by the Executive Committee of the new Lake of the Ozarks Medical Society. This new society will be composed of three counties: Camden, Miller and Morgan.

Other changes are also underway. The Mid-Missouri Medical Society currently has plans for re-organization. And the Jefferson County Medical Society has requested a change to the Tenth Councilor District. This request will be submitted to the House of Delegates at the Annual Session in April.

The Council approved the resolution adopted at the MSMA Interim Session concerning medical student involvement. This resolution called for the initiation of a program of inviting and sponsoring medical students at the MSMA Annual Sessions. The Council also formed a new committee to investigate methods of increasing medical student membership. The committee consists of Drs. Louis P. Hetlage, chairman, John I. Matthews and Claude W. Cooper.

In other actions, the Council:

- Accepted a report from the Committee on the Impaired Physician. This program is now in effect to offer assistance to physicians impaired by addiction to alcohol and drugs.
- Approved a request to poll the presidents of component medical societies concerning physicians treating arthritis.
- Heard a report from the Commission on Interspecialty Medicine concerning obsolete medical procedures.
- Approved accreditation for one year of Spellman Memorial Hospital in Smithville to sponsor continuing medical education programs.
- Approved a mailing to all hospitals not currently accredited to inform them of CME procedures.
- Adopted a proposal to bring an AMA Negotiating Workshop to Missouri.
- Requested staff to set up a "Jogging Event" to take place at the 1979 MSMA Annual Session.
- Approved the "Establishing Yourself in Medical Practice" workshop to be held May 3-4. 1979 at the Hilton Inn in Columbia.
- Set Interim Session for Nov. 10-11, 1979, at the Ramada Inn in Columbia.
- Voted to hold the next Council meeting, Feb. 2-3, 1979, at the Hilton Inn in Columbia.

Poll to be conducted on physicians treating arthritis

Local Medical Society secretaries will soon be requested to submit information on the number of members in each society who treat arthritic patients.

The Missouri Governor's Task Force on Arthritis requested Council permission to poll each local society in an effort to gain more knowledge on the current availability of care for arthritic patients. The Task Force acknowledged that the information received may not be a complete list of those treating the disease, but felt the cooperation of local societies would provide valuable information.

Methods devised to fund students to MSMA meetings

At the December 16, 1978 MSMA Council meeting, a resolution concerning the sponsoring of medical students to MSMA meetings was adopted. The purpose of this resolution is to establish a method of implementing Resolution 19, which was approved at the 1978 MSMA Interim Session.

The Council resolution reads:

> *RESOLVED, 1) That the MSMA Council support the concept of Resolution 19's plan to increase medical student participation of Missouri medical meetings including the annual MSMA convention.*
>
> *2) That funding of student participation utilize the AMA-ERF grants received from medical auxiliaries and physicians by the medical schools and designated by the donors.*
>
> *3) That this funding be supplemented by individual donations to AMA-ERF for this specific purpose and encouraged by solicitation through MSMA mailings or other appropriate methods.*

Additional Council representation requires Constitutional changes

Three changes in the MSMA Constitution will be voted on by delegates at the Annual Session, April 19-22, 1979. These changes are required to implement the Council Proposal on Additional Council Representation as adopted by the House of Delegates at the 1978 Interim Session.

As stated in the Constitution, any constitutional change must be published prior to its submission to the House.

The first change amends **Article V. Council** of the Constitution to read:

> *"The Council shall be the executive body of this Association when the House of Delegates is not in session. It shall be the judicial body of the Association when matters are referred to it for decision by the Association, by component societies or by individual members thereof. It shall consist of the President, President-Elect, Immediate Past-President, Secretary, Treasurer and the duly elected Councilors from each Councilor District. A majority of the voting members of the Council shall constitute a quorum."* (Amended from nine members)

Following are the two amendments to **Article VII. Officers:**

> *"Section 1. The Officers of this Association shall be a President, a President-Elect, three Vice-Presidents, a Secretary, a Treasurer, a Speaker and Vice-Speaker of the House of Delegates and Councilors selected as provided."* (The present Constitution specifies ten Councilors.)
>
> *"Section 2. The officers shall be elected annually. The terms of Councilors and Vice-Councilors shall be two years. Half of the membership of the Council shall be elected each year. The Secretary and Treasurer shall be elected by the Council. The delegates from each Councilor District shall meet prior to the last day of the Annual Session and elect the Councilors* (changed from Councilor) *and Vice-Councilor from that district. In the event of death, resignation or removal of any Councilors, the Vice-Councilor shall automatically fill the vacancy. The officers shall serve until their successors are elected and installed."*

AMA House votes on three Missouri resolutions

During the Interim meeting of the AMA House of Delegates in Chicago, three resolutions submitted by he MSMA were acted upon.

The first resolution called for membership on the AMA Council on Scientific Affairs to be by appointment of the Board of Trustees rather than election by he House of Delegates. This resolution was not adopted.

The Missouri delegation to the AMA introduced a resolution concerning hospices. The following substitute amendment was adopted:

RESOLVED, That the American Medical Association approve the physician-directed hospice concept to enable the terminally ill to die in surroundings more homelike and congenial than the usual hospital environment; and be it further

RESOLVED, That this action be widely publicized to encourage extension and third party coverage of this specialized approach for the provision of terminal care.

A substitute amendment was also adopted for Missouri's third resolution regarding continuing medical education accreditation. That substitute resolution reads:

RESOLVED, That the American Medical Association affirm the concept of accreditation of continuing medical education by state medical associations whose continuing medical education standards meet American Medical Association or Liaison Committee on Continuing Medical Education (LCCME) continuing medical education standards; and be it further

RESOLVED, That the American Medical Association seek modification of the Bylaws of the LCCME to provide for the accreditation of continuing medical education by state medical associations with accreditation standards approved by the American Medical Association; and be it further

RESOLVED, That the American Medical Association convey its support of this policy to the LCCME through its representative LCCME members.

At the AMA meeting, the Missouri delegation agreed to hold some joint meetings with delegates from Kansas, Oklahoma, Arkansas, Nebraska and Iowa at the AMA Annual Session. One of these meetings will be held with the express purpose of interviewing candidates for AMA offices. At another, issues before the AMA House of Delegates will be discussed.

Deadline for resolutions to Annual Session is March 2

MSMA members, Component Medical Societies and Student Delegates wishing to introduce resolutions at the 1979 Annual Session of the Missouri State Medical Association are reminded that March 2 is the deadline for insertion of resolutions in the Delegates' Handbook.

Any resolution to be introduced after that time must be made available to the House of Delegates 24 hours before the session in which it is to be introduced. Sufficient copies of the resolution or funding for same must be supplied by the sponsor.

At the second session of the House, the same procedure must be followed, but such introduction requires two-thirds approval. At the final session unanimous approval is needed for introduction.

Medical school enrollment hit new peak in 1977-78

The medical school enrollment hit a new peak in 1977-78 with a total enrollment of 60,456 in the 122 U.S. medical schools. This is an increase of 2,190 over the previous years, says the American Medical Association's 78th annual report on medical education.

For the first time in many years, the AMA noted a significant downturn in the number of applicants to medical schools. The total number of applicants in 1977-78 was 40,569, down from 42,155 the previous year. However, there were still many more applicants than the schools could accept since new enrollment totaled 16,134 students.

New provisions of the Health Manpower Act caused a substantial reduction in the number of new foreign medical graduates entering the country. The total of foreign graduates serving in house staff positions in U.S. hospitals dropped from 15,097 at the start of 1977 to 10,188 at the start of 1978.

By the end of 1977 the total number of medical and osteopathic physicians had reached 437,000. The ratio of doctors to population has jumped from 149 per 100,000 in 1960 to 198 per 100,000 at the end of 1977.

Roger Weis is new director of Missouri Dental Association

Roger A. Weis has been appointed Executive Director of the Missouri Dental Association, effective January 1, 1979.

Mr. Weis previously served as the Assistant Executive Director of the Jackson County Medical Society for 8-1/2 years. He was also Executive Director of the Clay County Medical Association and the Kansas City Society of Ophthalmology and Otolaryngology and was business manager of the *Greater Kansas City Medical Bulletin.*

MORE LEGISLATIVE CONTACTS ARE NEEDED!

I would like to participate in the "Legislative Contact" Program.

Please send me additional information.

Name ______________________________

Address ____________________________

City/State __________________________

Mail to:
Missouri State Medical Association
P.O. Box 1028
Jefferson City, MO 65102

Establishing Yourself in Practice Workshop scheduled for May

A two-day practice management workshop will be held in the spring for physicians planning to go into practice: residents; physicians leaving the military or prepaid groups. The program will be held May 3 and 4, 1979, at the Hilton Inn in Columbia.

Sponsored by the MSMA, the "Establishing Yourself in Medical Practice" workshop will be conducted by Conomikes Associates, nationally recognized medical practice management consultants.

The workshop is limited to 30 to ensure maximum participation. It provides practical "nuts and bolts" information, a comprehensive workbook which will serve as a permanent practice management reference work, and other handout materials including samples of some of the medical office systems that will be recommended.

The registration fee is $60 for members of the MSMA and $75 for non-members. This includes two luncheons.

Following is the program content for the workshop:

1. **Personnel**
   How to recruit & select the best personnel.
   Training tips that improve performance.
   Reviewing personnel performance & salaries.
   Policies and rules.
   Improved communications: Doctor/Staff/Patient.

2. **Patient flow**
   Telephone techniques for better patient service.
   Effective appointment scheduling systems.
   Office design and layout; equipment.

3. **Financing your practice — Leasing**
   Dealing with banks and bankers.
   Financing your equipment, improvements.
   Rent, buy or lease?
   How to evaluate your future office location.

4. **Medical records**
   What do you need?
   Alphabetical vs numeric filing.
   Where and what type of file cabinets.

5. **Financial management techniques**
   Basic bookkeeping requirements.
   How to keep track of patient charges.
   Billing your patients — collection techniques that work and improve patient communications.
   Insurance processing.
   Periodic financial review by the physician.

6. **Economic and legal aspects of practice**
   Solo practice; partnerships and groups.
   What to negotiate for in a partnership or groups.
   Professional corporations?

7. **Practice setting and practice-building techniques**
   Choosing a lawyer and accountant.
   Professional and economic prospects of your community.
   Should your spouse or relative be involved in your practice?
   Effective methods to build your practice.

For additional information, please clip the accompanying box and mail it to the MSMA, Box 1028, Jefferson City, MO 65102. If you wish to enroll at this time, please include a check.

Establishing Yourself in Medical Practice
Workshop

Please send additional information on the "Establishing Yourself in Medical Practice" workshop, May 3 and 4, 1979, at the Hilton Inn, Columbia, to:

Name ______________________________

Address ______________________________

City ______________________________

New computer system installed in MSMA headquarters

MSMA Headquarters is undergoing a late-year change as the Association is proceeding with the installment of an in-house data processing system.

The in-house system will replace the computer service bureau arrangement the Association has had with the AMA the past three years. Earlier this Fall, the AMA decided to terminate its service bureau arrangements with 13 State Associations.

A special committee of the Council investigated various service bureaus and in-house computer proposals before deciding to purchase a data processing system. The new system should greatly improve the flow of membership information to members and to the MSMA.

Along with dues information on members, the system will also be capable of listing all members in a particular specialty, provide a breakdown by local society of categories of members, and keep an accounting of Continuing Medical Education credits earned by members.

The new system is expected to be operational by February 1.

MOMEDICO Board now offers higher limits on coverage

Recently, a general mailing was made to all MSMA members concerning MOMEDICO, the Association-owned stock professional liability insurance company. MOMEDICO, which was chartered by the state of Missouri in February, 1978, offers occurrence policies to all MSMA members. It also has domestic re-insurance.

The MOMEDICO Board of Directors approved the offering of new limits of $1 million/$1 million. MOMEDICO can also provide higher limits of excess professional liability insurance for physicians currently being insured by the Medical Protective Company.

Approximately $2 million in premiums have been collected during the first nine months of operation.

Because MOMEDICO was formed and is owned by the Missouri State Medical Association, it is expressly patterned for the requirements of the medical profession in Missouri. To contact MOMEDICO please write or call: Missouri Medical Insurance Company, 100 North Broadway, St. Louis, MO 63102; (314) 241-4774.

Accept no substitute for your professional judgment

As a physician, you have the right to prescribe the drug which you believe will most benefit your patients. Now, substitution laws make it more difficult to exercise that right. In many states, unless you specifically direct pharmacists to dispense your brand-name prescription as written, they may be required by law to substitute another drug for your brand-name prescription.

This means that the ultimate drug selection is no longer yours; its source is left to the pharmacist's discretion. You will have forfeited your right to prescribe as you see fit. Preserve your rights. Specify that you will accept no substitution.

When you accept no substitutes...

- You ensure that your patient receives exactly that product you have specified on your prescription
- You choose the quality of the product dispensed to your patient
- You can exercise the right to select a product based upon its proven therapeutic performance and to select a manufacturer that stands behind its brand name or generic product
- You can support the kinds of research programs that are vital to new drug discovery and development
- You can help sustain important physician, pharmacist and patient education services supported by innovative, research-oriented firms

For complete information on the drug substitution law effective in your state, please consult your local Pfizer Representative.

© 1978, Pfizer Inc.

Pfizer **PHARMACEUTICALS**

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, John N. Martin, M.D., St. Joseph
President-Elect, Andrew McCanse, M.D., Kansas City
Vice-President, Donald A. Fakhoury, M.D., Kansas City
Vice-President, Joseph V. Finnegan, M.D., St. Louis
Vice-President, H. B. Ivy, M.D., Springfield
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, James M. Stokes, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Lily Ann Hanes, M.D., St. Louis
Immediate Past-President, Howard J. McAlhany, M.D., Springfield

DELEGATES TO THE AMA

James C. Sisk, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*
Rae W. Froelich, M.D., Lebanon
Francis X. Lieb, M.D., St. Louis, *Alternate*
Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Donald Judd, M.D., St. Louis, *Alternate*

COUNCILORS

Richard V. Bradley, M.D., St. Louis, *Chairman*
Eugene T. Hansbrough, M.D., Poplar Bluff, *Vice-Chairman*

1st District, Richard C. Hedges, M.D., North Kansas City
Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Richard V. Bradley, M.D., St. Louis
Vice-Councilor, Richard Fallon, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
Vice-Councilor, Frederick D. Peterson, M.D., St. Louis
5th District, H. Peter Ekern, M.D., Mexico
Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
Vice-Councilor, Roy W. Pearse, Jr., M.D., Nevada
7th District, Irving H. Clark, M.D., Kansas City
Vice-Councilor, Ronald A. Youmans, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
Vice-Councilor, Marvin Singleton, M.D., Joplin
9th District, Claude W. Cooper, M.D., Thayer
Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, Eugene T. Hansbrough, M.D., Poplar Bluff
Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright. Permission will be granted on request for reproduction in reputable publications provided proper credit is given and author gives permission.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript. References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet. Colored illustrations will be used when suitable if author assumes the actual cost.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

Please give notice of change of address at least one month in advance of the change, giving old and new addresses.

Contents for January, 1979

Scientific Articles:

Pelvic Lymphadenectomy in Prostatic Carcinoma; Gilbert Ross, Jr., M.D., A. Philip DePauw, M.D. and Joseph Montie, M.D. 23

Tonsillectomy, *Is It Necessary?;* Donald J. Joseph, M.D., William E. Davis, M.D. and Jerry Templer, M.D. 25

Current Concepts in Breast Cancer, *Part II-Pathologic Considerations and Early Diagnosis;* Carl G. Kardinal, M.D. 30

Use of a High Bulk Diet After a Small Bowel Bypass Operation for Obesity, *Case Reports;* Robert L. Glass, M.D. 34

Special Features:

A Prescription for Ailing Medical Education in America: A. Bernard Ackerman, M.D. 10

Meet the MISSOURI MEDICINE Contributing Editors, Publication Committee and Editorial Board 14

Preliminary Program — 121st MSMA Annual Session 18

News and Features:

MSMA News Round-Up . . . . Insert (4-5)

Photo-Comment by James A. Clawson, M.D. 8

Editor's Corner 9

MISSOURI MEDICINE, *Why and How* 14

President's Message 37

MSMA Auxiliary 39

County Society News 40

News From the Medical Schools 43

New Members 46

In Memoriam 49

Continuing Education Coming Events 50

Index to Advertisers 53

Missouri Medicine in Review 54

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
William M. Hart, M.D., Columbia
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Photo-Comment by James W. Clawson, M.D., Springfie

Drywall Hammer
ESTWI
The Cooper Group
The Cooper Group
PLUMB
PERMABOND
GRIPS HANDLE TIGHT

The FTC selects tools for its discussion of the relative value scale with the anesthesiologists.

Editor's Corner

In this issue, you will find pictures and brief notes about the people who enable monthly copies of Missouri Medicine to reach your desk.

First of all, of course, you do this yourselves with an allocation of your Missouri State Medical Association dues. That allocation is put to use in an amazingly economical way by a group of talented and qualified individuals. The only person of this group who is paid is your managing editor, Jean Duensing, and a very good job she does, too. That is the way she makes her living. The rest of us — Editor, Contributing Editor, Contributing Editor-Photographer, Editorial Board and Publications Committee — see that Missouri Medicine is issued because we think it is worthwhile and because we feel an obligation to our colleagues and to their profession.

It was not until I began to write this that I realized the very high qualifications of the people with whom I was working. Indeed, I am embarrassed because the credentials of most of them exceed my own. But it is this sort of people with whom I find it stimulating to be involved. If Missouri Medicine cannot be a journal which scientifically justifies its existence, then I find no justification for its existence at all. And if I am ever convinced of its failure in this regard, then you will no longer find me as editor of Missouri Medicine.

Wilfred E. Wooldridge, M.D.

Special Article

A Prescription for Ailing Medical Education in America

By
A. BERNARD ACKERMAN, M.D.
New York, N. Y.

PHYSICIANS IN PRACTICE before the Second World War, so I am told by older colleagues, recall with pleasure the halcyon days when they were among the most respected and best-loved of persons. Today, physicians in America are viewed with a mixture of suspicion, resentment and anger. What has gone awry in the past 30 years with the high regard in which physicians were held? Surely, doctors are now better trained in medical science and medicine is more advanced scientifically than ever before.

I contend that the altered perception of the doctor lies not only in recent societal changes that include "health" insurance of various forms and a public medically more sophisticated, but in actual deleterious changes in the character of physicians as a result of deficiencies in preliminary and later medical education.

It is a curious irony that despite the evident loss of esteem in which physicians in America are held nowadays, more college students in absolute numbers now wish to study medicine but, at the same time, the relative number of applicants accepted in American medical schools is less than ever before. One reason for the remarkable attractiveness of the practice of medicine is the near certainty of a substantial income for anyone with an M.D. degree who actively practices medicine. No other degree and practice confers such economic (and social) security. Thus, at the outset, there is a crass motive on the part of many students for seeking to study medicine.

Most young men and women who apply to medical school plan one day to engage in private practice, i.e., to care for patients. However, the admissions committees of most medical schools are composed mainly of lay administrators, full-time teachers and researchers of the basic sciences of medicine and of relatively few work-a-day practitioners. The bias of these committees is toward applicants who aver commitment to a career in academic medicine. Therefore, applicants are forced to lie to admissions committees about their aspirations and assert a desire for an academic career rather than a practitioner's one.

Who among the tens of thousands of candidates are actually accepted into a first-year medical class? What are criteria of admissions committees? Foremost is the academic record of the candidate. Those with grade point averages less than 3.6 (A−) are virtually without a chance of even being considered. The competition, thus, is fierce and encourages the premedical student not only to pursue narrow scientific studies, but even to cheat in them. All energies from the freshman year of undergraduate college on (and in some cases from high school days) are directed to securing a spot in medical school — any medical school. This usually means majoring in a basic science like biology or chemistry, limitation of study to related sciences and mathematics, and spending summers in laboratories as research assistants or in hospitals as observers with menial tasks. It is more likely that cultural activity like traveling in foreign lands, playing in amateur theatre or engaging in an archeological dig would be equally valuable in the development of a future physician.

In attempting to gain admission to a medical school, the compulsion is to study for innumerable examinations, the results of which determine a student's fate. Admissions committees advise borderline candidates to take more "science" courses, perhaps advanced calculus and physical chemistry, which are likely to be of no value whatsoever in managing patients. Why are not courses in art, logic, psychology, music or the humanities recommended for young people who will later be dealing with human beings in physical and emotional need?

One question that members of admissions committees to medical schools apparently do not sk themselves as they weigh the academic scores f one candidate against another is, "Would I want his person to be *my* doctor?"

Once having attained admission to medical chool, the student is bombarded with facts of iochemistry, physiology, anatomy, pharmacol-gy, etc. There are seemingly limitless facts to be earned about subjects that are mostly taught in an ninspired way by nonmedical academics who ave no sense for the relevance of the material hat they expound to human illness and patient are. Medical students scribble notes furiously, gorge themselves with the facts and then disgorge them on examinations. Memorization is the certain route to successful completion of medical school. Practically nowhere is the capacity to think in an original, critical or logical manner encouraged; practically nowhere are concepts rather than minutae emphasized and practically nowhere are ideas rather than disconnected data valued. No one, no matter how bright, retains but a tiny fraction of the mass of information required to be committed to memory especially during the first two years of formal medical study.

Such an unpleasant experience converts such idealists as there may be among medical students into cynics. One need only compare the enthusiastic, anticipatory attitude to a lecture of a first-year class to that of the same class to a lecture in the third year. One then finds inattention and indifference. By the fourth year, many students no longer even come to lectures. They know better. There is then no joy, no fervor, no intellectual ferment in medical education.

When the medical student emerges at long last from the stultification of the preclinical years to contact with patients, he is once again subject to disillusion and disappointment, this time by the dehumanized position of patients within hospital settings. Too often, patients become merely their diseases, lupus erythematosus, multiple sclerosis, myocardial infarction, etc. Their individuality is lost in the routinized, depersonalized, nosocomial environment.

The medical student on the wards and in the operating rooms is also too often exposed to insensitive treatment of residents by attending physicians, interns by residents, and themselves by everyone senior to them. Nurses, secretaries, clerks and other ancillary personnel are not uncommonly considered by physicians to be handmaidens rather than coworkers. The medical student can only wonder worriedly about how patients can be managed gently by doctors when doctors so often handle one another indelicately.

It is with pleasure that MISSOURI MEDICINE's first article of 1979 should be one by A. Bernard Ackerman. Dr. Ackerman is a person of international renown. He is one of the leading medical educators in America. He is Professor of Dermatology and Pathology, New York University School of Medicine in New York City. He is certainly one of the premier dermatopathologists in the world and author of several texts and of innumerable medical articles. More important, he is a very genuine and compassionate individual with a deep concern for the problems of today's American medical profession.

In the spirit of these attributes, the article by Dr. Ackerman should be read, again and again, because it will broaden the thinking of the academician and considerately appeal to all the rest of us. It is by such narrow threads that our destinies do hang. — ED.

At the end of the second and fourth years of medical school and after the internship, there are more examinations, National Boards and State Boards, which again test factual information that plays little or no role in actual patient care. From the beginning to the end of the medical school experience, medical students are trained and tested to be something other than what most aspire to be, what patients want them to be and what the "dis-eases" of patients require than to be.

Is there a remedy for these deficiencies of medical education? I think that there is. I propose that students be selected for medical school on the basis of their human and personal qualities as much as their intellects. One does not have to be a laboratory genius to care for patients effectively. Once *in medical school*, the student should be exposed to a curriculum that emphasizes the humanities and the arts as well as the sciences. Medical schools should teach more from the writings of Hippocrates, Maimonides, Locke, Osler, William Carlos Williams, Arthur Conan Doyle, Chekhov, Schweitzer and Oliver Wendell Holmes — physicians all! This could be done without lengthening the medical school program by simply elevating concepts about basic sciences at least on a par with pursuit of details about them that may be soon forgotten. The National Board examinations should be designed to test a student's capacity to think as well as his grasp of fundamental concepts and information.

Lastly, medical education should once again focus on the patient as a sacred object of attention. Once again, the patient must be glorified as an idealization. As the late Dr. David Seegal expressed it, "Everytime a doctor visits a patient, the patient must be better for the visit, else why the visit?"

The next generation of medical students, unlike mine, could be educated to be a medical artist rather than an uninspired tradesman, an original rather than a conventional thinker, a humanist and idealist rather than a pragmatist. Then the Hippocratic vision might be fulfilled, "where there is love of man there is also love of the art."

National health insurance costly

It is with growing concern that I read about plans for a National Health Insurance program. As a physician recently arrived from Canada, and having been part of such a plan, I am disappointed in this obvious political ploy on the part of Sen. Edward Kennedy.

The major reason for my uprooting my family and moving 1,900 miles was socialized medicine. Government intervention at every level of medical practice has caused Canada to lose some 500 physicians to the United States with an estimated 700 to 1,000 in the next year. How can such discontent go unnoticed?

The gross abuse of "free medical care" is nonexistent in my private practice in Texas. If cost containment is the issue, then NHI is not the way to obtain this. Perhaps a lesson should be taken from the British National Health Service. There are almost five bureaucrats administering each British hospital bed today, each drawing a government salary. The NHS' head bureaucrat has nearly 8,800 paper pushers on his personal staff alone. The NHS now numbers 750,000 workers making it the largest single employer in Britain. Is this what Sen. Kennedy means by cost containment?

BARTON J. ROMANEK, M.D., C.C.F.P.
Lockhart, Tex.

From the Austin American Statesman. Reprinted with permission.

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

When you're good people recognize you.

Highly effective
Single-dose convenience
Non-staining
Economical
Pleasant tasting

Antiminth®
(pyrantel pamoate)
equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION

a drug of choice in
pinworm infections

Please see brief summary of prescribing information on facing page.

©1977 LONE RANGER T.V., INC.

The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions.

However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

---

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).

© [illegible]

RHEUMATOLOG

Motrin 400 mg TABLETS
ibuprofen, Upjohn

The confidence that comes from experience—
one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

The confidence that comes from experience—
one more reason to prescribe

Motrin 400 mg TABLETS
ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day

How Supplied

Motrin Tablets, 300 mg (white)	
Bottles of 60	NDC 0009-0733-01
Bottles of 500	NDC 0009-0733-02
Motrin Tablets, 400 mg (orange)	
Bottles of 60	NDC 0009-0750-01
Bottles of 500	NDC 0009-0750-02
Unit-dose package of 100	NDC 0009-0750-06
Unit of Use bottles of 120	NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

NIM-3

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001

Some people can't see our name.

Prevent Blindness.

Every 12 minutes someone goes blind. Yet, half of all blindness is needless. Early eye care for children can correct amblyopia. Glaucoma can be arrested...sight lost to cataracts, restored. Blinding eye injuries can be dramatically reduced by safety precautions. These all add up to saving precious sight. For more information write:
National Society for the Prevention of Blindness, 79 Madison Avenue,
New York, NY 10016.

PREVENT BLINDNESS®

Business
Overhead
Expense
Insurance
Pharmacy
Date

A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

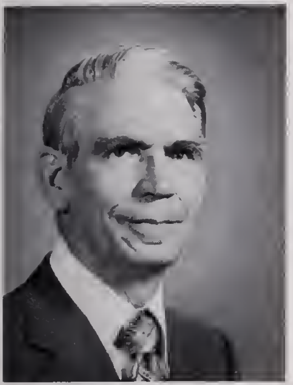
Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

Missouri Medicine

. . . Why and How!

Missouri Medicine is published for members
of the Missouri State Medical Association
through the personal and professional interest and editorial
efforts of the MSMA members introduced on the
next three pages.
If you have not done so, please refer to Editor
Wilfred E. Wooldridge's comments on page 9.
The Contributing Editors provide the material for the
special feature each has created.
The Publication Committee members assist the editor in
determining basic publication and advertising policies.
The Editorial Board is comprised of physicians of the
various specialties. Their first responsibility is to
assist the editor in reviewing and carefully evaluating the
merits of manuscripts submitted to the journal.
The goal of the entire "MO MED" staff is to produce
a journal you look forward to receiving . . . to publish
information and news of interest and benefit to all members.

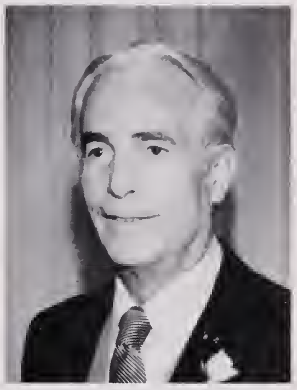
Contributing Editors



James Clawson, M.D.
Springfield

As *Contributing Editor-Photographer*, Dr. Clawson provides the unique and timely photo-comment feature which was introduced in MISSOURI MEDICINE in May, 1978. His comparable editorial photos have appeared in the *Greene County Medical Society Bulletin* since 1970. Dr. Clawson received his M.D. degree at St. Louis University School of Medicine, where he also served his internship and residency in surgery.

Dr. Pollock has served the Journal for 25 years as *Contributing Editor* of the historical column, "Missouri Medicine In Review." He was invited to write the column by Vincent T. Williams, M.D., editor at that time. He has contributed the column, "Medicine in the Bible," for the *Jackson County Medical Society Bulletin*, which also has published his column, "Forty Years Ago," for the past five years. Dr. Pollock recently retired from the private practice of general surgery.



Leo H. Pollock, M.D.
Kansas City

Publications Committee

Wilfred E. Wooldridge, M.D., Chairman

William C. Mixson, M.D.
Kansas City

A graduate of the University of Texas School of Medicine, Dr. Mixson is a member of the American College of Obstetrics and Gynecology and the American College of Surgeons. He has served as the speaker of the MSMA House of Delegates and has been active in local and state medical organizations for many years. Dr. Mixson is a member of the Board of Directors, Kansas City Blue Cross. He was appointed to the Publication Committee in 1969.

Dr. Sherwin has been a member of the Publication Committee since 1969. He received his M.D. degree at St. Louis University School of Medicine where he has been assistant clinical professor since 1960. He served his internship and residency in general surgery at the St. Louis University Hospitals plus a residency in surgery of malignant diseases at the Barnard Free Skin and Cancer Hospital. He is a former editor of *St. Louis Medicine*.

Charles S. Sherwin, M.D.
St. Louis

Ernest Lorenc, M.D.
Springfield

Dr. Lorenc received his M.D. degree at the State University of Iowa and his M.S. (Dermatology) degree at the University of Minnesota where he was a Fellow in Dermatology and a Mayo graduate. He was the 1960 recipient of the Paul A. O'Leary Award. Dr. Lorenc was president of the Missouri Dermatological Association, Inc. in 1970-1971 and is a member of the American Academy of Dermatology and the Noah Worcester Society. He became a member of the Committee in 1968.

Dr. Stuart came to the Publications Committee in 1969 with a special understanding of MISSOURI MEDICINE, having served as councilor of the Fifth District, chairman of the Council and president of the MSMA (1966-1967). He was editor of his college newspaper and has written 15 articles for publication in medical journals. Dr. Stuart received his M.D. degree at the University of Louisville School of Medicine. He is in the private practice of internal medicine.

Byron M. Stuart, M.D.
Boonville

Editorial Board

Philip C. Anderson, M.D.
Columbia

A John and Mary R. Markle Scholar (1966), Dr. Anderson has had extensive clinical, research, teaching and administrative experience. In addition to this appointment, he is editorial consultant to seven other publications including the *Archives of Dermatology*, *Encyclopaedia Britannica*, *JAMA* and the *International Journal of Dermatology*. Dr. Anderson is chairman and professor, Division of Dermatology at the University of Missouri Medical Center.

Dr. Bradshaw has been Medical Director of Continuing Education and Extension, University of Missouri-Columbia, since 1976 and is associate professor of family and community medicine. He has served as vice-chairman and chairman of the State Board of Health and was a member of the State Board of Health for Development and Placement of Rural Physicians in 1973. Dr. Bradshaw served as councilor for the Sixth MSMA District from 1968 to 1976.

William D. Bradshaw, M.D.
Columbia

C. H. Bentlage, M.D.
Joplin

Dr. Bentlage received his M.D. degree at the University of Missouri School of Medicine and served his rotating internship and general surgery residency at Wilford Hall, USAF Hospital in San Antonio, Tex. He is a diplomate of the American Board of Surgery, a fellow of the American College of Surgeons and is a member of the Southwest Missouri Chapter and Missouri State Chapter, American College of Surgeons. He became a member of the Editorial Board in October, 1978.

Dr. Clary feels that his knowledge of a wide area in psychiatry and background in psychoanalysis, hypnosis, family therapy, group therapy and hospital psychiatry are his main assets as a member of the Board. He considers remedicalization of the field as one of the big issues in psychiatry today. Dr. Clary is interested in publishing articles that have a bridging effect between the field of psychiatry and other branches of medicine.

William F. Clary, M.D.
Springfield

John W. Berry, M.D.
St. Louis

Dr. Berry has been in the private practice of internal medicine in St. Louis since 1956. He is assistant clinical professor of medicine at Washington University, general medical advisor to the Southwestern Bell Telephone Company and chief of the Department of Infectious Diseases at St. John's Hospital. A member of the Editorial Board since 1962, Dr. Berry also has served on the editorial board of *The Internist*.

Dr. Hart is the Roy E. Mason Distinguished Professor of Ophthalmology and chairman of the Department of Ophthalmology at the University of Missouri Medical Center. He also is professor of the bioengineering-advanced automation program at the University. He serves as executive director of the Eye Research Foundation of Missouri, Inc. Dr. Hart is consultant for the General Medical Sciences Institute, NIH, the Federal Aviation Agency and the National Association of Visually Handicapped, among others.

William M. Hart, M.D.
Columbia

Richard D. Blim, M.D.
Kansas City

Dr. Blim is a member of the executive board of the American Academy of Pediatrics and chairman of District IV, liaison to the AMA Interspecialty Advisory Board, liaison to the Council of Medical Specialty Societies, MSMA Alternate Delegate to the AMA and a past-president of Jackson County Medical Society. He feels that these appointments provide an important perspective and expose him to many forces currently affecting organized medicine.

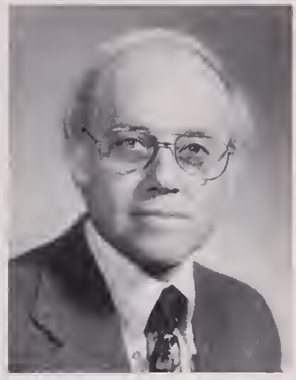
Dr. Kardinal has been director of internal medicine at Ellis Fischel State Cancer Hospital since 1974. He received the Lange Publications Award for outstanding achievement as a medical student at Washington University. He is certified by the American Board of Internal Medicine in internal medicine, hematology and medical oncology. Dr. Kardinal believes that "the journal should remain a strong publication reporting current information of general interest in a comprehensive and readable manner."

Carl G. Kardinal, M.D.
Columbia

Ben H. Koon, M.D.
Kansas City

Dr. Koon received his M.D. degree at the University of Pennsylvania School of Medicine. He is a past-president of the Missouri Academy of Family Practice and a member of the American Academy of Family Practice. He served in the U. S. Air Force from 1956 to 1960. Dr. Koon has been a member of the Editorial Board since 1972.

Well versed in the fields of hematology and internal medicine, Dr. Neu feels that these factors qualify him for his editorial position with MISSOURI MEDICINE and will allow him to use these skills in reviewing articles submitted for publication. He also believes that as a member of the editorial staff, he can function as a personal representative of the MSMA journal to individuals residing in the southwest portion of Missouri.



Leo T. Neu, Jr., M.D.
Springfield

Thomas M. Mier, M.D.
St. Louis

Dr. Mier is clinical professor of obstetrics and gynecology at the St. Louis University School of Medicine and is in private practice. A graduate of Loyola University Stritch School of Medicine, he is a member of the American College of Obstetrics and Gynecology and the American College of Cytology. He has served on the Editorial Board since 1963.

As an oncologist-hematologist in academic practice, Dr. Perry is interested in clinical research and, to a lesser degree, applied research in addition to patient care. He was an instructor at the Mayo Medical School before he joined the teaching staff at the University of Missouri-Columbia as assistant professor of hematology and medical oncology in 1975. Among other current activities, he is a member of the American Society of Internal Medicine Cost Containment Committee.

Michael C. Perry, M.D.
Columbia

Bentley A. Nelson, M.D.
Kansas City

Dr. Nelson was appointed to the Board in 1963. A graduate of the University of Kansas School of Medicine, he is a diplomate to the American Board of Ophthalmology and Otolaryngology, a Fellow in the American Academy of Ophthalmology and Otolaryngology and a member of the American Society of Ophthalmological and Otolaryngological Allergists. He is a past-president of the Kansas City Society of Ophthalmology and Otolaryngology.

Dr. Ritter believes that his being in private practice in a community setting will enable him to better understand the interest and questions of the majority of physician-readers of MISSOURI MEDICINE. An orthopaedic surgeon, he graduated cum laude when he received his M.D. degree at Washington University in 1962. Dr. Ritter was certified in his specialty by the American Board of Orthopaedic Surgery in 1969.

Raymond A. Ritter, Jr., M.D.
Cape Girardeau

Richard O. Craig, M.D.
St. Joseph

A charter member of the Missouri Chapter, American College of Surgeons, Dr. Craig also is a member of the Missouri Surgical Association and the Kansas City Surgical Society. He was appointed to the Editorial Board in 1977. Dr. Craig is a past-president of the Buchanan County Medical Society.

Wayne A. Simril, M.D.
St. Louis

A graduate of Washington University School of Medicine, Dr. Simril is a member of the Radiological Society of North America, the American College of Radiology and the American Academy of Orthopaedic Surgeons. He has served on the Editorial Board since 1963.

Donald J. Mehan, M.D.
St. Louis

Dr. Mehan became a member of the Editorial Board in 1963. A graduate of St. Louis University School of Medicine, he is a member of the American College of Surgeons and the American Urological Association.

Robert K. Skillman, M.D.
Kansas City

Dr. Skillman has been a member of the Board since its inception in 1956. A graduate of the University of Kansas School of Medicine, he is a member of the American College of Physicians, the American Society of Internal Medicine and the American Society of Hematology.

Jean Duensing
Managing Editor

Ms. Duensing is "first assistant" to the editor and is responsible for all production work for the Journal. Prior to joining the MISSOURI MEDICINE staff in 1966, she was affiliated with the Jefferson City newspapers, radio and television. She is a past-president of Missouri Press Women.

Preliminary Program

MISSOURI STATE MEDICAL ASSOCIATION

121st Annual Session

Chase-Park Plaza Hotel, St. Louis **April 19-22, 1979**

Thursday, April 19

8:00 AM Registration of Delegates.
10:30 AM House of Delegates Meeting, Opening Session.
1:00 PM Reference Committee Meetings.
6:30 PM Missouri State Surgical Society Dinner and Board Meeting.
6:30 PM American Medical Women's Association Cocktails and Dinner.

Friday, April 20

8:00 AM Registration.
8:00 AM Missouri University Board of Directors Breakfast and Meeting.
9:00 AM General Session — *Cost Containment.*
Introductions: John N. Martin, M.D., St. Joseph, MSMA President.
Speaker: Hoyt D. Gardner, M.D., Louisville, Ky., President-Elect, American Medical Association.
10:30 AM Intermission to View Exhibits.
11:00 AM Program Sponsored by the Emergency Room Physicians.
11:00 AM *Problems in Surgical Intensive Care Unit.*
Panel Participants:
John Collins, M.D., Stanford, Calif., Professor and Chairman, Department of Surgery, Stanford University.
Walt Bernards, M.D., Galveston, Tex., Professor of Anesthesiology, University of Texas.
Joseph Ruwitch, M.D., St. Louis, Assistant Professor, Clinical Medicine and Cardiology, Washington University School of Medicine.
Moderator: George L. Tucker, M.D., St. Louis.
Sponsored by the Missouri State Surgical Society.
11:00 AM *Use of Treadmill Stress Test Monitoring and Holter Monitoring in High Risk Post MI Patients.*
Moderators:
James C. Clouse, D.O., Clinton.
David D. Thomasson, M.D., Springfield.
Sponsored by the American Heart Association, Missouri Affiliate.
11:00 AM *Annual Charles A. Brasher, M.D. Medical Lectureship.*
Sponsored by the Missouri Chapter, American Thoracic Society and the American Lung Associations of Eastern and Western Missouri.
11:00 AM *The Use and Abuse of Modern Tranquilizers.*
Sponsored by the Missouri Psychiatric Association.
11:00 AM Program Sponsored by the Missouri Dermatological Society.
Speaker: John Strauss, M.D., Iowa City, Iowa, Chairman of Dermatology, University of Iowa.
11:00 AM Program Sponsored by the Missouri Orthopaedic Association.
12:30 PM Missouri University Alumni Luncheon.
Missouri Thoracic Society Luncheon.
1:00 PM Program Sponsored by the Emergency Room Physicians.
1:30 PM Lecture Schedule by Missouri Dermatological Society.
2:00 PM New Concepts of Breast Cancer: The Role of Conservative Surgery?
Panel Participants:
Bernard Fisher, M.D., Pittsburgh, Pa., Professor and Chairman of Surgery, University of Pittsburgh.
Carlos A. Perez, M.D., St. Louis, Director of Radiation Oncology, Washington University School of Medicine.
Walter C. Bauer, M.D., St. Louis, Surgical Pathologists-In-Chief Barnes and Associated Hospital.
William L. Donegan, M.D., Milwaukee, Wis., Professor of Surgery, Marquette School of Medicine, University of Wisconsin.
Moderator: Falls B. Hershey, M.D.
Sponsored by the Missouri State Surgical Society.

2:00 PM *Everything You Wanted to Know About Blood Platelets, But Were Afraid to Ask.*
Sponsored by the Missouri Society of Pathologists.
2:00 PM *Acid-Base for the Clinician.*
Walter C. Bernards, M.D., Galveston, Tex., Professor of Anesthesiology, University of Texas.
Sponsored by the Missouri Society of Anesthesiologists.
2:00 PM Program Sponsored by the Missouri Orthopaedic Association.
3:30 PM Intermission to View Exhibits.
3:30 PM Missouri State Medical Foundation Board Meeting.
4:00 PM **House of Delegates**, Second Session.
4:00 PM Missouri State Allergy Association Business Meeting.
6:00 PM Reference Committee Meetings.
6:30 PM Cocktails and Dinner:
Missouri Society of Pathologists.
Physical Medicine and Rehabilitation.
Missouri Psychiatric Association — "Medical Marriages" — Mary Ann Bartusis, M.D.
Missouri State Surgical Society.
Speaker: Gilbert Campbell, M.D., Professor and Chairman of Surgery, University of Arkansas School of Medicine.

Saturday, April 21

7:30 AM MSMA Auxiliary Public Affairs Breakfast.
8:00 AM Registration.
8:00 AM Missouri Dermatological Society Course on *Modern Therapeutics* in conjunction with the American Academy of Dermatology.
9:00 AM *Discuss the Issues with Your AMA Delegates.* (Missouri's AMA Delegates and Alternates will be available for an open forum-type discussion.)
9:00 AM *New Concepts in Venom Immunity – Clinical Application.*
Speakers: "Stinging Insects" — Speaker to be announced.
"Snakes" — H. James Wedner, M.D., St. Louis, Assistant Professor of Medicine, Washington University, Division of Allergy and Immunology.
"Missouri Brown Spider" — Philip C. Anderson, M.D., Columbia, Professor of Medicine, University of Missouri.
Sponsored by the Missouri State Allergy Association and the Missouri Chapter, American College of Pediatrics.
9:00 AM Program Sponsored by the American Cancer Society, Missouri Division, Inc.
9:00 AM Program Sponsored by the Missouri Ophthalmological Society, Inc.
9:00 AM Program Sponsored by the Missouri OB-GYN Society.
9:00 AM *Pediatric Rehabilitation*
Speaker: Margaret A. Turk, M.D., Columbus, Ohio.
Physical Rehabilitation and the Worker's Compensation Law.
Speaker: Mr. John Dixon, St. Louis.
Sponsored by Physical Medicine and Rehabilitation.
9:00 AM Program Sponsored by the Emergency Room Physicians.
9:00 AM *Diagnosis and Treatment of Sinus Disease and Surgery of the Paranasal Sinuses.*
Speaker: Frank N. Ritter, M.D., Ann Arbor, Mich., University of Michigan.
Sponsored by the Missouri Ear, Nose and Throat Association.
10:00 AM Missouri Radiological Society Board of Directors Meeting.
10:30 AM Intermission to View Exhibits.
11:00 AM Continuation of Missouri Ophthalmological Society, Inc. Program.
11:00 AM *Management of the Geriatric Amputees.*
Speaker: K. Ken Hu, M.D., St. Louis.
Live Demonstration of Application of Temporary Lower Extremity Prosthesis.
Speakers: K. Ken Hu, M.D. and his Associates, St. Louis.
Sponsored by Physical Medicine and Rehabilitation.
11:00 AM *Surgical Malpractice in Missouri* — Panel Discussion.
Panel Participants:
Mr. Ronald R. Kennedy, Jefferson City, Executive Secretary, Professional Liability Review Board.
Mr. James E. Hullverson, Mr. Robert G. Burridge, St. Louis, Attorneys at Law.
Moderator: Robert L. Glass, M.D., Sedalia.
Sponsored by the Missouri State Surgical Society.
11:00 AM *Drug Abuse Update.*
Speaker: Ronald Dougherty, M.D., Syracuse, N. Y., Director, Drug Abuse — Chronic Pain Treatment and Rehabilitation Center, Crouse-Irving Memorial Hospital.
Sponsored by the Missouri Academy of Family Physicians.

11:00 AM Program Sponsored by the Missouri OB-GYN Society.
11:00 AM Program Sponsored by the Emergency Room Physicians.
11:00 AM Program Sponsored by the Missouri Orthopaedic Association.
12:00 Missouri State Allergy Association Luncheon.
Radiology Board of Directors Luncheon.
Missouri Ophthalmological Society, Inc. Luncheon.
Physical Medicine and Rehabilitation Luncheon.
12:30 PM 50-Year Club Luncheon.
Missouri OB-GYN Society Luncheon.
Missouri Society of Neurosurgeons Luncheon.
1:00 PM Program Sponsored by the Emergency Room Physicians.
1:30 PM Missouri Medical Political Action Committee Meeting.
1:30 PM *Chronic Pain Treatment.*
Speaker: Ronald Dougherty, M.D., Syracuse, N.Y., Director, Drug Abuse, Chronic Pain Treatment and Rehabilitation Center, Crouse-Irving Memorial Hospital.
Sponsored by the Missouri Academy of Family Physicians.
1:30 PM Program Sponsored by the Missouri Radiological Society.
2:00 PM Presentation of Papers from Junior Fellows.
Sponsored by the Missouri OB-GYN Society.
2:00 PM Continuation of Program by Missouri Ophthalmological Society, Inc.
2:00 PM Program Sponsored by the Missouri Society of Neurosurgeons.
2:00 PM *Diagnosis and Treatment of Urologic Problems for Family Practitioners.*
Speakers: Faculty of the Division of Urology, Washington University, St. Louis, William R. Fair, M.D., Chairman.
Sponsored by the Federation of Missouri Urologists.
4:00 PM Missouri State Allergy Association Business Meeting.
5:00 PM Missouri University Medical Alumni Reception.
St. Louis University Medical Alumni Reception.
Washington University Medical Alumni Reception.
6:30 PM Social Hour for those attending Annual Banquet.
7:15 PM Annual Banquet.

Sunday, April 22

7:30 AM House of Delegates Breakfast and Final Session.
9:00 AM Missouri Dermatological Society meeting at Wohl Clinic.

MSMA MEMBERS!

Watch for Your Special Hotel Reservation Card!

For the convenience of outstate members who plan to reserve rooms at the Chase-Park Plaza Hotel in St. Louis for the 1979 Annual Session, the MSMA will mail a special, postage-paid reservation card with pertinent information.

You should receive your reservation card soon. Please forward it to the hotel as soon as possible for best accommodations.

★ *A PERMANENT SOLUTION TO MALPRACTICE PROBLEMS FOR MISSOURI DOCTORS* ★

MEDICAL DEFENSE ASSOCIATES, LTD.

1150 ~~1100~~ MISSOURI PHYSICIANS CAN'T BE WRONG!

That's right! Medical Defense Associates Ltd. of Springfield, Missouri is insuring 1150 ~~1100~~ Missouri doctors. Missouri doctors are moving to MDA at a rate of one per day. Because they obtain . . . .

- Malpractice insurance from a non-profit mutual assessment company, established and operated BY and FOR Missouri physicians
- Occurrence (rather than Claims-Made) Coverage
- Coverage for Punitive Damages
- Aggressive Defense of Unfounded Claims
- Highly competitive rates
- No Arbitrary Cancellation of Policies.
- No Additional Investment

MDA reserves now exceed 6.4 ~~$6~~ MILLION. Our books are open to inspection. If you're still not convinced . . . talk to one of your colleagues who has signed with MDA. Our policy holders are our best salesmen!

Kansas City (St. Louis Premiums for Physicians and Surgeons

			200/600		*$1 Mil. Excess*	
			First yr.	*Renewal*	*First yr.*	*Renewal*
Class	I	No Surgery	594	374	464	288
	II	Minor Surgery	983	563	768	432
	IIID	Urologist, Opthalmology, Proctologist	3,744	2.304	2.880	1,728
	IVB	General Surgeon	4,880	3,080	3,840	2,400
	IVA	Otolaryngologists, OBGYN, Plastic	6,243	3,795	4,896	2.938
	IVG	Thoracic, Neuro, Orthopedists	7,956	4,836	6,240	3,744
	IVH	Anesthesiologists	8,434	5,074	6,624	3,936

Outstate Premiums for Physicians and Surgeons

			200/600		*$1 Mil. Excess*	
			First yr.	*Renewal*	*First yr.*	*Renewal*
Class	I	No Surgery	540	340	400	240
	II	Minor Surgery	819	469	640	360
	IIIC	Urologist, Opthalmology, Proctologist	3,120	1,920	2,400	1,440
	IVC	General Surgery	4,067	2,567	3,200	2,000
	IVD	Otolaryngologist, OBGYN, Plastic	5,202	3,162	4,080	2,448
	IVE	Thoracic, Neuro, Orthopedists	6,630	4,030	5,200	3,120
	IVF	Anesthesiologists	7,028	4,228	5,520	3,280

The premium assessments are subject to adjustment based on actual claims experience. Additional classifications and rates for limits of 100/300, 200/400, and 500/1 Mil are available.

For additional information please call or write:

MISSOURI MALPRACTICE MANAGERS, 1031 E. Battlefield — Suite 117B, Springfield, MO 65807
Phone 1-800-492-7212 or (417) 883-0199

contains no aspirin

tablets
Darvocet-N® 100 (IV)
100 mg. Darvon-N® (propoxyphene napsylate)
650 mg. acetaminophen

Lilly
700565

Additional information available to the profession on request from Eli Lilly and Company Indianapolis, Indiana 46206

Eli Lilly and Company, Inc.
Carolina, Puerto Rico 00630

Volume 76, Number 1 — January, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Copyright, 1979 by Missouri State Medical Association. All Rights Reserved.

GILBERT ROSS, JR., M.D., A. PHILIP DePAUW, M.D.
and JOSEPH MONTIE, M.D., *Columbia*

Pelvic Lymphadenectomy in Prostatic Carcinoma

This article presents a brief review of the recent advances in prostatic carcinoma and a discussion of the experience with pelvic lymphadenectomy for prostatic carcinoma at the University of Missouri from the standpoint of prognostic and therapeutic implications. Dr. Ross is Professor and Chief and Dr. DePauw is Assistant Professor, Division of Urology, University of Missouri School of Medicine. Dr. Montie is Clinical Associate Professor of Urology.

THE NATURAL history, epidemiology and treatment of carcinoma of the prostate have been subjected to several recent comprehensive reviews which raise a number of issues concerning the management of this second most common malignancy in men.[1]

Recent developments include the following:

1. A sensitive radioimmunoassay for serum acid phosphatase which may have some value as a screening test for relatively early and potentially curable carcinoma of the prostate.
2. Acknowledgement of the role of various forms of radiotherapy in the long-term control and potential cure of localized carcinoma of the prostate.
3. Conflicting evidence concerning the dosage, timing and effect on survival of endocrine therapy.
4. Improved clinical staging with radionuclide scanning and pelvic lymphadenectomy.
5. The incidence of nodal metastases in various clinical stages of carcinoma of the prostate and their relationship to osseous metastases and survival.[2-6]

Survival is influenced in part by treatment and in large measure by the histological grade and clinical stage at the time of presentation. Clinical staging includes the 10% of patients in whom carcinoma is found incidentally in tissue removed for ostensible benign hypertrophy (Stage A). Another 10% to 15% will have asymptomatic induration of the prostate involving less than one lobe (Stage B_1) or one lobe or more (Stage B_2). Almost half of the patients will initially be seen with extraprostatic extension. Most will have symptomatic prostatism (Stage C). The rest (35%-40%) will have bone metastases (Stage D).

Although a progression from one stage to another is by no means invariable, inability to control the primary tumor would seem to be responsible for much of the eventual mortality of the disease.[7]

Although a number of treatment options are available for men with Stage A, B and C disease, we presently recommend pelvic lymphadenectomy and radical retropubic prostatectomy for men in good general health and with well differentiated B_1 disease. The low incidence of pathological upstaging and opportunities for long term control are too good to make radical prostatectomy archaic in spite of its adverse effect upon sexual function and not insignificant risk of incontinence.

TABLE 1
CLINICAL VS SURGICAL STAGE—31 PATIENTS

Clinical Stage	*Number*	*Positive Pelvic Nodes*
A (Diffuse)	5	2 (40%)
B_1	9	1 (11%)
B_2	12	1 (8%)
C	4	2 (50%)

The patients who refuse radical prostatectomy and certain patients in good health below the age of 70 with clinical B2 and C disease, as well as those with Stage A carcinoma who have diffuse or poorly differentiated infiltration of the prostate, may benefit from lymphadenectomy and radiation therapy. We report our experience with pelvic lymph node dissection in prostatic carcinoma.

PATIENTS AND METHODS

In 1974, we began to perform pelvic lymphadenectomy in most patients in whom radical prostatectomy or curative radiotherapy was contemplated. To date, 31 patients have had a carefully performed extraperitoneal bilateral pelvic lymphadenectomy which begins with the dissection slightly above the bifurcation of the iliac artery and incorporates the most distal common iliac, external iliac and obturator nodes along with the fat and areolar tissue along the pelvic sidewall. In one instance, a modified dissection was done because of a prior aortic resection.

In 16 instances, simultaneous radical retropubic prostatectomy was performed. In one occasion, a subsequent radical perineal prostatectomy was performed. The remaining 14 patients were treated with radiotherapy, which recently has included both interstitial and external beam sources.

The mean age of the patients was 60 years with a range of 52 to 72. There were no postoperative deaths. The morbidity that could be ascribed solely to the node dissection seemed to be acceptably low and included prolonged ileus in several patients, one wound infection and one instance of early postoperative bleeding which required reexploration for control. Results comparing clinical and surgical staging are shown in Table 1.

DISCUSSION

Our results with lymphadenectomy are not greatly different from those reported in the literature although the small number of patients make comparison difficult.[8, 9] Furthermore, the relatively brief follow-up precludes any statement concerning possible therapeutic benefit. Nonetheless, the reports of Hilaris, Whitmore and associates would suggest that pelvic lymphadenectomy not only permits identification of the patient at greatest risk of developing osseous metastases, thereby encouraging adjunctive therapy, but also provides control of micrometastases. That this is probably beneficial is suggested by their data in which the hazard of subsequent osseous metastases was about 75% in the patient with positive pelvic nodes and only 25% in the patient with negative or minimal (single) nodal disease.[6, 10]

A pelvic node dissection also provides an opportunity for the implantation of various interstitial radiation sources within the substance of the prostate. Such therapy, although used for more than 25 years, is only now undergoing extensive investigation at a number of institutions and is yet to be subject to the critical analysis of time.[10-12]

Currently, in conjunction with our radiotherapists, we are employing a combination of interstitial ^{125}I seeds at the time of pelvic lymphadenectomy and subsequent external beam pelvic irradiation. Preliminary reports suggest that this may be an effective treatment modality with acceptably low morbidity.[10]

REFERENCES

1. Catalona, W. J. and Scott, W. W.: Carcinoma of the Prostate. J. Urol. 119:1, 1978.
2. Foti, Andras G., Cooper, J. Fenimore, Herschan, Harvey and Maluaez, Richard R.: Detection of Prostatic Cancer by Radioimmunoassay of Prostatic Acid Phosphatase. New Eng. J. Med. 297:1357, 1977.
3. Ray, G. R., Cassidy, J. R., and Bagshaw, M. A.: Definitive Radiation Therapy of Carcinoma of the Prostate: A Report of 15 Years Experience. Radiology 106:407, 1973.
4. Nesbit, R. M. and Baum, W. C.: Endocrine Control of Prostatic Carcinoma: Clinical and Statistical Survey of 1818 Cases. JAMA 143:1317, 1950.
5. Blackard, C. E.: The Veterans Administrative Cooperative Urological Research Group's Studies of Carcinoma of the Prostate: A Review. Cancer Chemother. Rep. 59:225, 1975.
6. Barzell, W., Bean, M. A., Hilaris, B. S. and Whitmore, W. F., Jr.: Prostatic Adenocarcinoma: Relation of Grade and Extent to Pattern of Metastases. J. Urol. 118:278, 1977.
7. Whitmore, W. F., Jr.: The Natural History of Prostatic Cancer. Cancer 32:1104, 1973.
8. Wilson, C. S., Dahl, D. S., and Middleton, R. G.: Pelvic Lymphadenectomy for the Staging of Apparently Localized Prostatic Cancer. J. Urol. 117:197, 1977.
9. McLaughlin, A. P., III *et al*: Prostatic Carcinoma: Incidence and Location of Unsuspected Lymphatic Metastases. J. Urol. 115:89, 1976.
10. Hilaris, Basil S., Whitmore, Willet F., Batata, Mostapp and Barzell, Winston: Behavioral Patterns of Prostate Adenocarcinoma Following an ^{125}I Implant and Pelvic Node Dissection. Int. J. Radiation Oncology Biol. Phys. 2:631, 1977.
11. Flocks, R. H., *et al*: Treatment of Carcinoma of the Prostate by Interstitial Radiation With Radioactive Gold (Au 198), J. Urol. 68:510, 1952.
12. Carlton, C. E., Jr., Dawoud, F., Hudgins, P. and Scott, R., Jr.: Irradiation Treatment of Carcinoma of the Prostate: A Preliminary Report Based on 8 Years of Experience. J. Urol. 108:924, 1972.

DONALD J. JOSEPH, M.D., WILLIAM E. DAVIS, M.D.
and JERRY TEMPLER, M.D., *Columbia*

Tonsillectomy

Is It Necessary?

Surgical procedures on the tonsils are among the oldest forms of surgery. The first documented evidence of tonsil surgery was made by Celsus, who wrote "De Re Medicina" in the first century A.D. From the 12th to the 19th century, several procedures to incise, cauterize and partially or totally remove the tonsil were described.

Early in the 20th century, tonsillectomy and adenoidectomy became popular procedures as a panacea for almost any infirmity. The child who did not eat well or sleep well or failed to gain weight or had frequent colds or was lethargic or wet the bed was frequently subjected to a tonsillectomy and an adenoidectomy in the hope that it might improve his overall general condition. Most children whose parents could afford it had the procedure.

Antibiotics were not available to combat acute infections so the concept of "focal infection" in relation to systemic disease became established. It had been observed that brain abscesses were sometimes related to suppurative infections about the head and neck, septicemia often followed furuncles and gonococcal arthritis often followed gonorrhea. It is not surprising, then, that systemic diseases were thought to be related to infections of the tonsils, adenoids or teeth.

In 1940, Dr. H. A. Reimann[1] was one of the first physicians to cast doubt upon the routine removal of the tonsils and adenoids as the solution to systemic health problems. He observed that a tonsillectomy and an adenoidectomy did not prevent or alter the course of acute rheumatic fever, rheumatoid arthritis or inflammatory diseases of the eye or kidney.

The advent of antibiotics and increasing knowledge of systemic diseases eliminated many indications for tonsillectomy and adenoidectomy. One might have expected, then, that the incidence of the operative procedures would have decreased markedly. This was not the case, however. Immediately after World War II, the birth rate in the United States rose considerably. Many of the parents of these children had had tonsillectomies when they were young and their frustration over the child who was frequently ill led them to demand that the child be scheduled for surgery. Lipton[2] points out that there exists a dread or reluctance to remain passive in the face of persistent adversity and that inaction implies continued suffering.

During the past two decades, surgery of the tonsils and adenoids has been increasingly scrutinized. Many studies have been done, but most have lacked the scientific design to produce valid statistical information. This most common surgical procedure, which costs approximately one-half billion dollars a year, deserves close scrutiny.

Incidence of the Operations

Although it is generally believed that these surgical procedures are done less frequently now, McCammon[3] points out that the frequency of the procedures has not changed in the United States in the last 40 years. Approximately 25% of all children undergo tonsil or adenoid surgery and such operations account for approximately 50% of all major pediatric surgery and 10% of pediatric hospital bed days.[4] It is interesting to note, however, that the number of operations dropped from 1,103,000 in 1968 to 786,000 in 1975. Bluestone points out that the decrease in the total number of operations may be related to the total reduction in the number of children.[4] He observed that 60% of the tonsillectomies and adenoidectomies are performed on children under six years of age and that 60% of these procedures are performed by non-board-certified surgeons. Children with private physicians are more likely to have the procedures done than those seen in public clinics, and a great variation in incidence of the procedure exists between countries, and between states and even counties in the United States.[5]

Bacteriology and Virology

The mouth is a contaminated area with many microorganisms present, some of which are pathogenic. Their presence during an acute inflammation does not necessarily indict them as the etiological agent. On the other hand, negative surface culture does not rule out pathogenic organisms in the deeper tissues. Most bacterial infections of the pharynx, tonsils and adenoids are caused by the Group A beta hemolytic streptococci. Although the exact role of Haemophilus influenzae, Diplococcus pneumoniae, Staphylococcus aureus and Mycoplasma pneumoniae in acute inflammations of the tonsils and adenoids has not been well documented, they may cause infections in some patients.

The adenoviruses and the Epstein-Barr virus are major causes of pharyngeal tonsillitis. Some anaerobic organisms have also been identified. Sprinkle[5, 6] defines recurrent adenotonsillitis as a bacterial-viral disease. It is important to determine the underlying pathogenesis rather than compare various medical treatments with surgical treatment.

IMMUNOLOGY

More than a century ago, the tonsils and adenoids were postulated to play a role in combating infections because of their strategic location at the entrance to the digestive and respiratory tracts. It was thought that the tonsils and adenoids might act as mechanical filters to entrap bacteria and destroy them. Research in immunology has proved that defense mechanisms are far more complicated. Many interesting observations have been made, but their pertinence in determining the best method for treating chronic tonsil and adenoid inflammation and hypertrophy has not been established. It has been shown that some children with recurrent suppurative tonsillitis have hypergammaglobulinemia which slowly returns to a normal level several months after a tonsillectomy and adenoidectomy have been done.[5]

The evaluation of secretory, humoral and cellular mechanisms of immunity in cases of acute and chronic tonsillitis is extremely complicated and difficult. The effect of tonsillectomy or adenoidectomy or both on subsequent resistance to infections cannot be reliably evaluated. In view of the vast number of asymptomatic post-tonsillectomy individuals, the effects must be minimal.

MORTALITY AND MORBIDITY

The risks of morbidity and mortality must be accepted for lifesaving procedures. The majority of patients undergoing tonsillectomy and adenoidectomy do not have grave diseases, and serious complications are not acceptable.

The most common postoperative complications following the procedures are hemorrhage, respiratory obstruction and complications associated with general anesthesia.

Meaningful mortality statistics regarding surgery of the tonsils and adenoids are difficult to obtain. Such tragedies are apt to be reported under various headings such as hemorrhage, asphyxia, allergic reaction to drugs, anesthetic death, pulmonary complications, cardiac arrest and others. The variations of the death rate have been reported by investigators from 1 : 3,000 procedures to 1 : 100,000 procedures.[4, 7, 8]

A significant study was done by Pratt[8] in 1970 when questionnaires concerning mortality and morbidity associated with tonsillectomy and adenoidectomy were sent to 3,000 board-certified otolaryngologists. Forty percent of the recipients responded and indicated that in their years of practice, they had 377 deaths, an incidence of 1 in 16,381.

INDICATIONS FOR SURGERY

Wide variations in philosophy are evident and range from those physicians who feel that the procedure is rarely indicated to those who feel that almost any problem relating to the tonsils and adenoids constitutes justification for their removal. Most of the conservatives have been nonsurgeons such as pediatricians and internists, but many otolaryngologists, especially those who have been recently trained and those in academic positions, are also quite conservative.

In the past, the term "T&A" has been used as freely as "I&D" or "D&C," indicating that the procedures were done at the same time. There are indications for doing both procedures, but there is no reason to increase the morbidity by performing both procedures when just one is definitely indicated.

DEFINITE INDICATIONS

1. Chronic nasopharyngeal obstruction as a cause of cardiomegaly, cor pulmonale and pulmonary edema. This was recognized in the late 50s and early 60s.[9, 10] It is a rare condition, but most large medical centers will see one or two per year.
2. Hypertrophy of the tonsils causing significant difficulty in swallowing with loss of weight. These cases are rare and are not easy to identify. It is obvious that many well nourished children who

have no difficulty swallowing are seen with huge tonsils.

3. Hypertrophy of the adenoids causing nasal obstruction and speech problems. These patients must be evaluated carefully with verification by speech pathologists and with evidence of adenoid hypertrophy by x-rays. The condition must be constant and not one induced by allergy.

4. Suspicion of malignancy. An unexplained enlargement of a tonsil may be one of the earliest manifestations of a malignancy such as a lymphoma. A unilateral enlargement, especially with ulceration, may be a carcinoma.

5. Peritonsillar abscess. This is generally accepted as a definite indication because of the belief that abscesses recur, which may or may not be true. Some physicians incise and drain the abscess immediately but delay surgery until several weeks after the abscess has resolved. Others perform the procedure as a definitive therapy for the abscess which drains the abscess and avoids further surgery.[11] If the clinician believes that a tonsillectomy should be performed, the authors recommend that it be performed immediately as the definitive treatment.

Probable Indications

1. *Recurrent Acute Tonsillitis.* Paradise and Bluestone[12] noted that patients, when under direct observation, usually developed less illness than had previously been described and these illnesses, when occurring, were frequently not tonsillitis. If observation confirms the occurrence of four or more febrile episodes of tonsillitis per year that require antibiotic therapy, then tonsillectomy will probably be of benefit. The vast majority of tonsillectomies are performed for this reason.

2. *Recurrent Otitis Media.* An adenoidectomy may prove beneficial for recurrent otitis media, whether suppurative or serous and when medical therapy and tympanostomy tubes, and a trial of allergic therapy have failed.

3. *Chronic tonsillitis.* Patients with chronic tonsillitis which is resistant to antibiotics, is accompanied by anterior cervical lymphadenopathy and does not resolve in three to six months may benefit from a tonsillectomy.

4. *Chronic Suppurative Sinusitis.* In the presence of obstructing adenoids proved by observation or x-ray, an adenoidectomy may be of benefit.

5. *Hypertrophy of the tonsils associated with voice problems.* These cases are rare, but some patients with a muffled voice, if thoroughly evaluated by a speech pathologist, might benefit from a tonsillectomy.

The tonsillectomy is among the oldest of surgical procedures. Although it was the most frequently performed procedure in this country during the last three decades, the advent of antibiotics and increasing knowledge of systemic diseases have eliminated many indications for both it and the adenoidectomy. Indications for the procedures have become more stringent. The authors list them and discuss contraindications, technique for surgery, possible complications and postoperative care.

Dr. Joseph is Professor of Surgery and Chief, Division of Otolaryngology; Dr. Davis and Dr. Templer are associate professors of surgery, Division of Otolaryngology, University of Missouri Medical Center and the Harry S. Truman Memorial Hospital.

Contraindications to Surgery

These procedures are elective and should not be done on any patient in whom a coexisting condition would add additional risks. Anemia, hemorrhagic disorders or acute infections, especially of the upper respiratory system, are examples.

Many surgical procedures have been done for respiratory allergy. However, allergic management is the therapy of choice. Allergy in itself is not a contraindication to tonsil surgery.

It is inadvisable to do this surgery when the child is younger than three years. It is best to wait until the child is five years of age unless the indications outweigh the risks of the complications of blood loss.

The presence of a cleft palate or a submucous cleft palate is usually considered a contraindication to this type of surgery.

Technique for Surgery

A tonsillectomy and an adenoidectomy are not minor procedures and the patient should have essentially the same work-up as for any other major elective surgery.

The procedures are performed with the patient under general orotracheal anesthesia. However, local injection of lidocaine and epinephrine may be used for an adult tonsillectomy. A head light is helpful in providing constant illumination.

The operation is done with the patient in the supine position. Some surgeons stand at the side of the patient, but most sit at the head of the table. When the patient is adequately anesthetized, a self-retaining mouth gag is inserted.

The adenoidectomy is usually done first. There are many variations in the surgical techniques for removal of the adenoids. They are not well encapsulated and their size and location may vary considerably. Adequate palpation and visualization of the nasopharynx must be made prior to removal. An adenotome or adenoid curette is used to remove the largest masses of tissue. The remaining tissue is removed with adenoid curettes or punch forceps. The cutting blade of each instrument is kept flat against the nasopharynx so that the lymphoid tissue and mucosa are removed without injury to the pharyngeal constrictor muscles or torus tubarius. Keeping a pack in the nasopharynx until the completion of the tonsillectomy is usually adequate to control the bleeding.

There are two major methods for removing the tonsils, namely the guillotine method and the dissection method. The guillotine procedure reached its greatest popularity in the 1930s and 1940s when a great many tonsillectomies were being done and when it was important to accomplish the procedure quickly.

Most tonsillectomies today are done by the dissection method. The procedure is begun by incising the mucosa over the tonsils at the margins of the anterior and posterior pillar. The tonsil with its capsule is dissected from the loose areolar tissue by which it is held in the tonsillar fossa. The dissection is carried from superiorly to inferiorly since there is a thickening of the fibrous tissue at the lower pole which does not dissect easily. The inferior attachment is severed with a tonsillar snare.

The tonsillar packs are left in place for three to five minutes and then the tonsillar fossae are inspected for residual bleeding. Bleeding vessels may be cauterized or ligated by a slip knot or stick tie.

COMPLICATIONS

Hemorrhage

Excessive hemorrhage during surgery is unusual, but it may occur if the dissection is difficult and prolonged. The patient should not leave the operating suite until hemostasis is complete and excessive blood loss has been replaced.

Immediate Postoperative Bleeding

The most serious bleeding usually occurs shortly after the patient is returned to the recovery room. It may occur for several reasons.

1. An inadequate inspection may not identify vessels which continue to bleed and manifest themselves by the vomiting of fresh blood.
2. A poor surgical technique results in injury to underlying muscular tissue or leave remnants of lymphoid tissue which are prone to bleed postoperatively. Poorly applied ligatures around vessels may loosen or become dislodged when the patient begins to regain consciousness and swallow.
3. In spite of a well performed procedure, some patients will bleed postoperatively.

When postoperative hemorrhage occurs, the nurse must notify the surgeon immediately. Prompt examination and management are imperative. The patient's blood pressure and pulse must be monitored closely. If the bleeding is significant, a blood sample should be drawn immediately for type and cross matching. The suctioning of a clot from a fossa may allow a tiny bleeding vessel to retract and stop bleeding. The pressure over the bleeding point is applied with a sponge moistened with 2% tetracaine and epinephrine. An application of silver nitrate or a tannic acid-epinephrine paste may stop the bleeding. The infiltration of the bleeding area with lidocaine with epinephrine may cause the bleeding to stop. If not, it provides anesthesia for ligating or cauterizing the bleeder. If the bleeding is from the nasopharynx, a postnasal pack should be inserted for 12 to 24 hours.

If these simple measures do not control the bleeding, the patient should be returned to the operating room where application of a general anesthesia will allow for a more complete inspection and control of the hemorrhage. A patient on the borderline of shock and with a stomach full of blood is not a good candidate for a general anesthetic.

Delayed or Secondary Hemorrhage

By the fifth day after surgery, a white or yellowish membrane covers the granulating bed of the fossae. Between the fifth and tenth days, this membrane sloughs, revealing granulation tissue and some epithelialization over the area. At this point, there may be minor bleeding which usually stops spontaneously. Delayed bleeding is rarely dangerous. However, the patient should be instructed to return to the medical facility for an examination. The previously outlined methods for handling immediate postoperative bleeding are employed. However, the area does not accept sutures or ties well since it is usually quite friable.

Other Complications

Prior to the routine use of endotracheal anesthesia, pulmonary complications secondary to aspiration were not unusual and were manifested by atelectasis, pneumonia or lung abscess.

Poorly performed surgery may result in damage to the palate, tonsillar pillars or eustachian tube.

Hypernasality may persist for several weeks following the procedure. In rare cases, surgical correction may be necessary.

Deciduous teeth can be easily dislodged so it is imperative to know which teeth were absent prior to surgery and which teeth, if any, were dislodged during surgery.

Following surgery, some children will experience insomnia, nightmares, bedwetting and other behavioral disturbances. Young children, especially, are susceptible to these experiences. The child must be carefully advised beforehand about just what will happen and what he is to expect.

POSTOPERATIVE CARE

The patient should be positioned on his side with his face partially down and at a lower level than the larynx. This position permits easy drainage or removal of any excess secretions from the mouth or nose. Any change in the vital signs, excess swallowing or noisy respiration should be investigated immediately by the surgeon. Most surgeons will have a printed sheet or card of instructions for the patient to follow at home.

For the most part, these instructions suggest that for the first two or three days, the diet should consist of liquids and very soft foods, such as custards, milk and broth. Beginning on the second or third day, protein is added in the form of soft boiled eggs, soft milk toast, eggnogs or protein bouillons. Patients are warned that citrus juices or tomato juice may cause pain in the throat during the first two or three days.

The patients are also told that the danger of serious bleeding after they have left the hospital is very small. Occasionally, however, there is some bleeding on the fifth, sixth or seventh day. Should this occur, they are instructed to remain calm, gargle gently with ice water and rest. If the bleeding does not stop promptly, they are instructed to call the surgeon.

REFERENCES

1. Reimann, H. A. and Havens, W. P.: Focal Infection and Systemic Disease: A Critical Appraisal. JAMA 114(1):1-6, Jan. 1940.
2. Lipton, S. D.: On Psychology of Childhood Tonsillectomy. Psychoanalyt. Stud. Child. 17:363-417, 1922.
3. McCammon, R. W.: Natural History of Respiratory Tract Infection Patterns in Basically Healthy Individual. Amer. J. Dis. Child. 122:232-236, 1971.
4. Bluestone, C. D.: Status of Tonsillectomy and Adenoidectomy: 1977. Laryngoscope 87(8):1233-1243, Aug. 1977.
5. Bluestone, C. D. *et al:* The Workshop on Tonsillectomy and Adenoidectomy. Ann. Otol. Rhinol. Laryngol. 84 Suppl. 19:1-79, 1975.
6. Veltri, R. W., McClung, J. E. and Sprinkle, P. M.: Epstein-Barr Nuclear Antigen (EBNA) Carrying Lymphocytes in Human Palatine Tonsils. J. Gen. Virol. 32(3):455-460, 1976.
7. Gray, L. P.: The T's & A's problem — Assessment and Reassessment. J. Laryngol. Otol. 91(1):11-32, Jan. 1977.
8. Pratt, L. W.: Tonsillectomy and Adenoidectomy: Mortality and Morbidity. Trans. Am. Acad. Ophthalmol. Otolaryngol. 74(6):1146-1152, 1970.
9. Menashe, V. D., Farrehi, C. and Miller, M.: Hypoventilation and Cor Pulmonale Due to Chronic Upper Airway Obstruction. J. Ped. 67(2):198-203, Aug. 1965.
10. Luke, M. J., Mehrizi, A., Folger, G. M., and Rowe, R. D.: Chronic Nasopharyngeal Obstruction as a Cause of Cardiomegaly, Cor Pulmonale, and Pulmonary Edema. Ped. 37(5):762-768, May 1966.
11. Templer, J. W., Holinger, L. D., Wood, R. P., Tra, N. T., DeBlanc, G. B.: Immediate Tonsillectomy for the Treatment of Peritonsillar Abscess. Amer. J. Surg. 134:596-598, Nov. 1977.
12. Paradise, J. L. and Bluestone, C. D.: Toward Rational Indications for Tonsil and Adenoid Surgery. Hosp. Pract. 2:79-87, 1976.

Reprints: Donald J. Joseph, M.D.
Department of Surgery
Division of Otolaryngology
807 Stadium
Columbia, Mo. 65201

The National Conference on Urologic Cancer will be presented on April 4-6 at the Los Angeles Hilton in Los Angeles by the American Cancer Society in cooperation with the National Bladder Cancer Project and the National Prostatic Cancer Project. The conference meets the criteria for 15½ credit hours in Category 1 of the AMA Physician's Recognition Award. For additional information, please contact the Missouri Chapter, ACS.

CARL G. KARDINAL, M.D., *Columbia*

Current Concepts in Breast Cancer

Part II. Pathologic Considerations and Early Diagnosis

PATHOLOGY

SEVERAL HISTOLOGIC types of invasive carcinoma of the breast have been described (Table 1). Edwin Fisher *et al*[1] have reviewed in a prospective manner the pathology findings of 1,000 patients enrolled on National Surgical Adjuvant Breast Project (NSABP) Protocol 4. They evaluated the tumor, the nipple, the skin over the tumor, the axillary lymph nodes, a random tissue block from each quadrant of the breast, the histologic type, histologic grade, cellular reaction and other variables.

More than 80% of all invasive breast cancers are either pure infiltrating duct carcinoma or contain a component of infiltrating duct carcinoma in combination with another histologic type. As a consequence, all comments related to breast cancer in general are applicable to this histologic type and all comparisons of breast cancers are relative to it (Table 2).

TABLE 1
INCIDENCE OF THE HISTOLOGIC TYPES OF INVASIVE BREAST CANCER*

	%
Pure Tumor Groups	
Infiltrating duct cancer	52.6
Medullary	6.2
Lobular invasive	4.9
Mucinous (colloid)	2.4
Tubular (well differentiated)	1.2
Adenocystic	0.4
Papillary	0.3
Carcinosarcoma	0.1
Paget's Disease	
With infiltrating duct cancer	2.1
With intraductal carcinoma	0.2
Combinations with Infiltrating Duct Cancer	28.0
Infiltrating duct	
+ Tubular	16.5
+ Lobular invasive	3.3
+ Mucinous	1.6
+ Lobular invasive + tubular	1.6
+ Other	5.0
Combinations not Including Infiltrating Duct	1.6

* Modified from E. Fisher *et al*, 1975[1]

Classical medullary carcinoma is a large, grossly circumscribed tumor with frequent mitotic activity and histologic features characteristic of a poorly differentiated tumor. A lymphoid infiltrate is a prominent feature prompting the designation of medullary carcinoma with lymphoid stroma. Despite the poorly differentiated histologic appearance, the prognosis is generally considered better than for patients with the standard infiltrating duct type. Patients with atypical medullary carcinomas lacking the classic histologic features described above have a prognosis similar to those with the infiltrating duct type.

Invasive lobular carcinoma is associated with a poorer prognosis. It is relatively frequently associated with other types of invasive carcinoma. When this occurs, there is a greater frequency of multicentricity, i.e., microscopic tumors in quadrants of the breast other than that of the primary lesion. Lobular invasive carcinoma as well as lobular carcinoma in situ are associated with a high incidence of bilaterality.

Pure mucinous or colloid carcinoma tends to

TABLE 2
PROGNOSIS OF THE HISTOLOGIC TYPES OF INVASIVE BREAST CANCER RELATIVE TO INFILTRATING DUCT CARCINOMA

Type	*Prognosis Relative to Infiltrating Duct*
Medullary carcinoma (classical)	Improved
Medullary carcinoma (atypical)	Same
Lobular invasive	Diminished
Mucinous or colloid (pure)	Improved
Tubular or well differentiated	Improved
Adenocystic	Improved
Papillary	Same
Combination tubular + infiltrating duct	Improved
Paget's Disease with infiltrating duct	Same
Other combinations with infiltrating duct	Same

occur in older women and is associated with a lower frequency of axillary metastases and a better prognosis than infiltrating duct cancer. Patients with mucinous carcinomas with mixed infiltrating duct elements do not have an improved prognosis.

Tubular or well differentiated adenocarcinoma is associated with an excellent prognosis even when associated with axillary metastases.[1, 2] The association of tubular and infiltrating duct carcinoma was the second most frequent form of mammary cancer in the NSABP series. When associated with the infiltrating duct type, the favorable prognosis seems to be maintained.

Paget's disease, which is neoplastic involvement of the epidermis of the nipple in association with carcinoma of the breast, was described by Sir James Paget in 1874. In the NSABP series, Paget's disease occurred in 23 of 967 patients in which the nipple was available for pathologic examination. Paget's disease represents the extension of neoplastic elements from underlying ducts to the nipple or metastases or both from an underlying carcinoma. Paget's disease probably is not a de novo intraepithelial cancer. Of the 23 cases described, all were associated with a clinically evident breast mass; 21 contained infiltrating duct cancer (pure or in combination with other histologic types) and two were intraductal (noninvasive) carcinomas. Most of these tumors were in the subareolar area. Paget's disease is associated with a greater frequency of multicentric cancer.

Inflammatory carcinoma of the breast is a clinical rather than a true pathologic subtype of breast cancer.[1, 3] Bell noted in 1814 that "when a purple color is on the skin over the tumor and accompanied by shooting pains, it is a very unpropitious beginning." Pathologic examination of the breast does not reveal inflammation but, rather, extensive lymphatic involvement. The inflammatory changes are due to a blockage of lymphatic spaces by tumor. If the criteria for the diagnosis of inflammatory breast cancer are limited to those cases with clinical red-to-purple discoloration, swelling, tenderness, warmth *and* dermal lymphatic involvement, the prognosis is uniformly dismal regardless of treatment. Patients with clinical inflammatory changes without dermal lymphatic involvement have been described and have an equally poor prognosis. Dermal lymphatic involvement also has been noted in some patients who do not have clinical inflammatory changes; the prognosis for this group is better than for those with true inflammatory cancer, but poorer for those with breast cancer in general.[4]

This is the second segment of a four-part, comprehensive article which presents a review of the current concepts of breast cancer. Part I was published in the December, 1978 issue. Parts III and IV will appear in future issues.

The series deals with risk factors in the development of breast cancer, etiologic considerations, the relative prognosis for patients with the various histologic types of breast cancer, prognostic factors, the mammography controversy, controversies in the primary therapy of breast cancer and the management of the patient with advanced disease. The following outline will provide an overall view of this work:

Part I

**Epidemiologic Considerations in
Breast Cancer in Women and Men**

Part II

**Pathologic Considerations and
Early Diagnosis**

Part III

**Staging, Primary Therapy and
Adjuvant Chemotherapy**

Part IV

Approach to the Patient with Advanced Disease

Dr. Kardinal is Director of Internal Medicine, Ellis Fischel State Cancer Hospital and Cancer Research Center. This investigation was supported in part by Clinical Cancer Education Grant CA-17946 from the National Cancer Institute, Department of Health, Education and Welfare.

TABLE 3
RELATIONSHIP OF TUMOR SIZE AND AXILLARY NODE INVOLVEMENT*

Tumor Size (cm)	*% With Axillary Metastases*
0-1	14
1-2	25
2-3	51
3-4	64
4-5	69
6+	71

* Modified from Say and Donegan, and Rodes *et al*[5, 6]

Tumor size is an important prognostic factor, and the goal of early detection programs is to find small lesions of presumably good prognosis.[1, 5] There is a clear association between tumor size and the frequency of axillary node metastases (Table 3). The increasing frequency of node involvement with increasing size of the primary tumor may actually be the important discriminant rather than the size of the primary tumor itself. It is important to note that 14% (seven of 50 cases) of occult mammary cancers detected by mammography only had already metastasized to the axilla (Rodes *et al*).[6] It has been noted by E. Fisher *et al*[1] that tumors larger than 4.0 cm in maximum diameter were found predominately in younger women (20 to 44 years) and were consistently associated with multicentric foci of cancer, vascular and lymphatic invasion, the presence of four or more positive axillary nodes and short-term treatment failure.

Multicentric foci of carcinoma in patients with breast cancer has been recognized for some time. With the tendency toward lesser surgical procedures for the primary therapy of breast cancer such as "lumpectomy" or segmental resection, the risk of multicentricity takes on a new dimension. In the NSABP series, either invasive or noninvasive cancers independent from the primary lesion were found in 13.4% of 904 patients. In 11.6%, multicentric cancer was found in two and in 5.8% in three independent quadrants of the breast. Multicentric cancers were associated with grossly noncircumscribed primary tumors, the presence of nipple involvement, noninvasive cancer in the vicinity of the primary, and tumors with a maximum diameter of more than 4 cm.

Axillary node metastasis is the most important single pathologic variable in breast cancer.[1, 7] Clinical evaluation of the axilla, however, is quite unreliable. Fully 38% to 39% of axillas regarded as clinically negative on physical examination are found to be positive on histologic examination, and 24% to as many as 35% of axillas regarded as clinically positive are histologically negative.[1, 8] Also, from 25% to 33% of axillas considered histologically negative on a single node section are found to have microfoci of metastatic disease on further sectioning of the pathologic material.[1, 9] It also is important to realize that the number of nodes available for pathologic evaluation is a function of two things: (1) the number of nodes removed by the surgeon; (2) the number of nodes dissected out of the specimen by the pathologist.

Despite the limitations, the detection of axillary node metastasis is of great importance. Data from the NSABP also have shown that it is the number of positive nodes that is important rather than the proportion of positive nodes, i.e., the prognosis for a patient with four of five nodes that are positive is little different from a patient with four of ten nodes involved. It also appears that the level of the involved node with reference to the pectoralis minor is not as important as the total number of nodes containing tumor.

The data of B. Fisher *et al*,[7] which are outlined in detail in Table 4, describe the relationship of axillary node involvement and treatment failure of breast cancer patients treated with a standard radical mastectomy. By ten years, half of all breast cancers will have recurred. One quarter of the patients with no evidence of axillary node involvement will have recurrence. In three quarters of the patients with positive nodes, treatment will fail. At this time, the recurrence in patients with negative nodes (24%) cannot be predicted by any known series of criteria. It is also not known if the 24% with recurrence and the 25% who will demonstrate axillary node metastases on resectioning of lymph nodes are in the same group of patients, but studies to evaluate this are currently ongoing.

Although patients with one to three positive

TABLE 4
TREATMENT FAILURE AFTER STANDARD RADICAL MASTECTOMY

		% Treatment Failures			
	Number	18 MOS	3 YRS	5 YRS	10 YRS
All Patients	370	19	—	39.7	49.5
Negative nodes	198	6	—	17.7	24.1
Positive nodes	172	35	—	71.0	76.1
Premenopausal					
Negative nodes	52	6	17	21.2	25.5
Positive nodes	60	50	61	70.0	76.3
1-3 nodes positive	24	13	—	45.8	56.5
≥ 4 nodes positive	36	64	82	86.1	88.9
Postmenopausal					
Negative nodes	146	8	15	16.4	23.6
Positive nodes	112	22	50	62.5	76.0
1-3 nodes positive	58	18	37	51.7	67.9
≥ 4 nodes positive	54	48	62	74.1	84.3

* Modified from B. Fisher *et al*[7]

nodes are at significant risk of long term treatment failure, their risk of short term treatment failure at 18 to 24 months is not significantly different from the negative node group.[1] This cannot lull one into a false sense of security since well over half of these patients will ultimately have recurrence and die of their disease.[7]

Patients with four or more axillary nodes containing metastatic tumor are at a very high risk of developing recurrent tumor and death from the disease. Half of all these patients will have a recurrence by 18 months and three quarters by five years. All patients with four or more positive nodes should be considered to have systemic disease at the time of their initial presentation and be treated accordingly.

Screening and Detection

The emphasis on breast cancer screening and early detection is based upon the fact that small primary lesions are associated with a low incidence of axillary node metastases and a good prognosis for the patient (Table 3). Currently, almost 90% of all breast masses are detected by the patient and have an average size of 3.0 cm in diameter at the time they are noted.[10] The importance of self-examination in asymptomatic women cannot be overemphasized and pamphlets describing the appropriate technique for patients are available through the American Cancer Society. Similar pamphlets describing the appropriate technique for physician examination of the breast are also available.

Despite good patient motivation in regard to self-examination and despite good physician motivation in regard to frequent, thorough breast examination as part of routine examinations, it is hard to detect a breast cancer that is less than 1 cm in diameter by this means. One centimeter lesions contain approximately ten^9 tumor cells and are associated with a 14% to 25% incidence of regional node involvement. Consequently, there is need to detect subclinical primary lesions of the breast if cure rates are to be increased substantially. In response to this need, the National Cancer Institute and the American Cancer Society established a series of 27 Breast Cancer Detection Demonstration Projects in 1973. The object of this program, which is currently ongoing, is to screen 280,000 women of ages 35 to 74 once annually for five years using mammography and physical examination. Thermography also was used as a screening modality, but it has been discontinued.

That mammography can detect occult (<1.0 cm) carcinoma of the breast is now unequivocally established.[11] Also, that patients with occult invasive carcinomas detected by this means have a better prognosis than those with lesions grossly discovered on physical examination is also unequivocally established. Routine mammography of asymptomatic women, however, has become a controversial subject because of the theoretical risk of radiation-induced breast cancer.[12]

The theoretical risk is based upon the observation that the incidence of breast cancer among survivors of the atomic bomb blasts, who were exposed to 90 rads or more, have an incidence of breast cancer which is two to four times that expected. Also, tuberculous women subjected to repeated fluoroscopy and women treated with radiation therapy for acute postpartum mastitis have a greater incidence of breast cancer. Routine mammography by current techniques using low-dose film or the xeromammographic technique will give an exposure of 1.5 to 2.5 rads.[13] The question is if it is legitimate to extrapolate from the risk of higher exposures, such as 90 rads or more, to 1.5 rads and claim an increased risk. There are many who feel that this is not valid. Despite this and despite the observation that many of the occult carcinomas detected have been in women less than 45 years old, the current recommendations for mammograms in asymptomatic women is that they be done only in women over age 50. This may be a major step backward.

Thermography by current techniques must still be considered under investigation.[14] This technique is based upon the observation that cancers tend to be associated with increased blood flow to the area and this, in turn, is associated with an increase in local heat production. Although up to 90% of breast cancers are associated with a positive thermogram, there are many false-positive results. Better techniques that will be both noninvasive and nonradiologic may become available.

The concept of *minimal breast cancer* is an outgrowth of early detection and mammography screening programs.[10] Minimal breast cancer includes at least three reasonably discrete pathologic entities: lobular carcinoma in situ, noninvasive intraductal carcinoma and invasive carcinomas no larger than 5 mm to 7 mm. The relationship of lobular carcinoma in situ and intraductal carcinoma to invasive carcinoma has not yet been clearly established. As a result, specific

(Continued on page 35)

ROBERT L. GLASS, M.D., *Sedalia*

Use of a High Bulk Diet After a Small Bowel Bypass Operation for Obesity

Case Reports

THE USE OF THE JEJUNO-ILEAL BYPASS operation for the treatment of morbid obesity has been widely used and extensively studied.[1] During the early period of recovery from this lesion, the use of a low residue-low fat diet, along with codeine, diphenorphan hydrochloride with atropine (Lomotil) and calcium carbonate, is helpful in controlling the inevitable diarrhea.[2] After a period of relative freedom from these problems, a late (after six months) problem of recurrent diarrhea with intestinal colic and perianal pain has been observed in three of my patients. In each case, the symptoms were significantly improved by changing from a low-residue to a high-fiber diet.

The diarrhea which occurs after a small bowel bypass operation usually can be controlled with a low residue-low fat diet. Three case reports describe the improvement in patients who suffered recurrence of diarrhea after a period of relative freedom from the problem. Dr. Glass, who is in the private practice of general surgery, is Chief of Surgery at Bothwell Memorial Hospital and Assistant Professor of Surgery at the University of Missouri-Columbia Medical Center.

CASE REPORTS

Case #1 A 42-year-old registered nurse was 5 ft 7 in in height and weighed 320 lb for many years. Her blood pressure was as high as 290/180. On June 25, 1975, she had a 12 in-8 in (Scott) end-to-end jejuno-ileal bypass operation. She returned to work as the head nurse in an intensive care unit six weeks after the operation. Diarrhea was controlled with a low-residue diet, a dose of 30 cc of calcium carbonate (Titralax) six to eight times a day and Lomotil. One year after the operation, her weight had stabilized at 220 lb. Lower abdominal cramping pain increased with frequent, small watery stools. She added fresh fruit and bran to her diet. For two weeks, her cramps and flatus increased. Since then, she has had less abdominal cramping, formed or semiformed stools, less anal irritation and a progressive weight loss to 185 lb. Her current blood pressure is 150/80.

Case #2 A 31-year-old housewife was 5 ft 5 in in height and weighed 250 lb or more for several years. A low back pain (after three laminectomies) prevented active exercise. On July 26, 1977, the patient had a 12 in-8 in (Scott) jejuno-ileal bypass operation. Postoperative diarrhea was easily controlled with a low residue diet, a dose of 5.0 gm of calcium carbonate three times a day and an occasional dose of Lomotil. By October, 1977, she weighed 216 lb and began taking flexibility exercises for low-back pain with resulting improvement. However, she had "colicky" pain in her lower abdomen and frequent small watery stools.

Adding fresh fruit, fresh vegetables and bran to her diet resulted in a one-week period of increased flatulence but, also, firming of her stools, less abdominal colic and decreased anal pain. On Dec. 16, 1977, she weighed 200 lb, was not taking Lomotil or calcium carbonate and felt well.

Case #3 A 43-year-old housewife was 5 ft 3 in in height. She had weighed 240 lb for many years. She suffered degenerative joint diseases in both knees. She had a 12 in-8 in jejuno-ileal bypass operation in January, 1977.

Although she has worked regularly, she has required four admissions to the hospital for treatment of severe diarrhea and cramping abdominal pain. She responded briefly, but incompletely, to increased doses of antidiarrheal agents and an elemental diet. A change from a low residue diet to a high fiber diet, plus a psyllium preparation, has dramatically improved her symptoms and lessened her daily requirement of Lomotil from four to six tablets to one or two tablets per day. Her stools are firmer and she has less anal pain. She often supplements her diet with 5 cc of psyllium hydrophylic mucilloid with dextrose (Metamucil) twice a day for further improvement.

DISCUSSION

Diarrhea in the early phase of recovery from the short bowel syndrome (from any cause) is usually treated with a low residue-low fat diet, elemental diet or total parental nutrition.[3] This early-phase diarrhea is often associated with deficiency of potassium, magnesium and albumin and altered liver function tests. The use of codeine, Lomotil and calcium carbonate are also helpful in controlling diarrhea.

With time (usually three to six months), lengthening of the functioning small bowel and hypertrophy of the villi[3] with an increased absorptive capacity will compensate patients for their malabsorption. The colon also may increase its absorbtive capacity as evidenced by the reports of megacolon[4] after a jejuno-ileal by-pass operation. Although a low residue-low fat diet lessens diarrhea in the early postsurgical period, continuing this diet while the remaining gastrointestinal tract compensates may cause a syndrome of abdominal cramps and frequent small loose stools similar to those which have been associated with a low residue diet in persons with an intact gastrointestinal tract,[5] the so-called mucous colitis or irritable bowel syndrome. Improving the symptoms of diarrhea and abdominal colic with a high fiber diet would seem illogical, but this diet was effective for the patients reported. The symptoms improved and the stool became firm in consistency.

REFERENCES

1. Scott, H. William, Dean, Richard H., Shull, H. J. and Gluck, F.: Results of Jejunoileal Bypass in 200 Patients With Morbid Obesity. SGO 145:661, 1977.
2. Wright, H. K. and Tilso, M. D.: The Short Gut Syndrome; Pathophysiology and Treatment. Current Problems of Surgery, June, 1971.
3. Buchwald, H., Varco, R. L., Moore, R. R. and Schwarts, M. Z.: Intestinal Bypass Procedures; Partial Ileal Bypass for Hyperlipidemia and Jejunoileal Bypass for Obesity. Curr. Problems of Surgery, April, 1975.
4. Fikri, E., and Cassella, R. R.: Jejunoileal Bypass for Morbid Obesity, Results and Complications in 52 Patients. Am. J. Surg. 179:460, 1974.
5. Burkitt, D. P. and Trowell, H. C.: Refined Carbohydrate Foods and Disease, Some Implications of Dietary Fibre, Chp. #9. Academic Press, 1975.

Concepts in Breast Cancer

(Continued from page 33)

recommendations for the management of lobular carcinoma in situ and intraductal carcinoma are difficult to make.

Carter and Smith[15] have reported that in 49 cases of lobular carcinoma in situ, three patients were found to have invasive carcinoma on subsequent mastectomy. Of 38 patients with intraductal carcinoma, seven were found to have invasive cancer on subsequent mastectomy. It is too early to determine if this reflects the general association.

Until there are more data, a conservative approach is indicated. That is, in lobular carcinoma (in situ) and noninvasive intraductal carcinoma, resection of the primary lesion without a total mastectomy followed by semiannual to annual mammography is indicated. If the lesion is an invasive carcinoma of 5 mm to 7 mm, the patient should be treated with segmental mastectomy, total mastectomy or, even, a modified radical mastectomy.

REFERENCES

1. Fisher, E. R., Gregorio, R. M. and Fisher, B.: The Pathology of Invasive Breast Cancer. Cancer 36:1-85, 1975.
2. Taylor, H. B. and Norris, H. J.: Well-differentiated Carcinoma of the Breast. Cancer 25:687-692, 1970.
3. Droulias, C. A., Sewell, C. W., McSweeney, M. B. and Powell, R. W.: Inflammatory Carcinoma of the Breast: A Correlation of Clinical, Radiologic and Pathologic Findings. Ann. Surg. 184:217-222, 1976.
4. Lucas, F. V. and Perez-Mesa, C.: Inflammatory Carcinoma of the Breast. Cancer 41:1595-1605, 1978.
5. Say, C. C. and Donegan, W. L.: Invasive Carcinoma of the Breast: Prognostic Significance of Tumor Size and Involved Axillary Lymph Nodes. Cancer 34:468-471, 1974.
6. Rodes, N. D., Farrell, C. and Blackwell, C. W.: Missouri's Role in Breast Cancer Detection. Mo. Med. 74:689-694, 1977.
7. Fisher, B., Slack, N., Katrych, D. and Wolmark, N.: Ten Year Follow-up Results of Patients with Carcinoma of the Breast in a Co-operative Clinical Trial Evaluating Surgical Adjuvant Chemotherapy. Surg. Gynecol. Obstet. 140:528-534, 1975.
8. Fisher, B., Montague, E., Redmond, C., Barton, B., Borland, D. *et al:* Comparison of Radical Mastectomy with Alternative Treatments for Primary Breast Cancer. Cancer 39(Suppl.):2827-2839, 1977.
9. Saphir, O. and Amromin, G. D.: Obscure Axillary Lumph-Node Metastasis in Carcinoma of the Breast. Cancer 1:238-247, 1948.
10. Gallager, H. S. and Martin, J. E.: Minimal Breast Cancer: A Concept and Its Implications. Hosp. Pract., August 1972, pp. 91-94.
11. Peck, D. R. and Lowman, R. M.: Mammography. Current Application. JAMA 236:1886-1890, 1976.
12. Bailar, J. C. III: Mammography: A Contrary View. Ann. Intern. Med. 84:77-84, 1976.
13. Sadowsky, N. L., Kalisher, L., White, G. and Ferrucci, J. T. Jr.: Radiologic Detection of Breast Cancer. N. Engl. J. Med. 294:370-373, 1976.
14. Moskowitz, M., Milbrath, J., Gartside, P., Zermeno, A. and Mandel, D.: Lack of Efficacy of Thermography as a Screening Tool for Minimal and Stage I Breast Cancer. N. Engl. J. Med. 295:249-252, 1976.
15. Carter, D. and Smith, R. R. L.: Carcinoma IN SITU of the Breast. Cancer 40:1189-1193, 1977.

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

Lowell G. Bennett
Beltone Hearing Aid Service
318 W. Walnut Street
Springfield, Missouri 65806
(417) 866-0551

Len Gidley
Beltone Kansas City Hearing Aid Service
1001A Grand Avenue
Kansas City, Missouri 64106
(816) 471-1943 (816) 471-4105

Beltone Hearing Aid Service
222 Kirkpatrick Building
St. Joseph, Missouri 64501
(816) 279-6501

Don Hicks
Beltone Hearing Aid Service
North Park Mall
101 Range Line Room 248
Joplin, Missouri 64801
(417) 624-0931

Dean Jones
Beltone Hearing Aid Service
P.O. Box 682 400 E. High
Jefferson City, Missouri 65101
(314) 635-3557

Beltone Hearing Aid Service
21 North 10th
Columbia, Missouri 65201
(314) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Service
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Service
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Service
State Fair Shopping Center
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

Beltone Hearing Aid Service
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Service
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

Beltone Hearing Aid Service
320 Spring
Sweet Springs, Missouri 65351
(816) 335-6727

Beltone WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

one of today's trends
in oral contraception . . .

stepping down estrogen levels to 50 mcg?

100
mcg estrogen
50
mcg estrogen

Do you have patients currently taking oral contraceptives containing 100 mcg of estrogen for contraception? A switch to a 50 mcg product may be desirable.§

Prospective and retrospective studies indicate a relationship between estrogen doses and serious adverse side effects. ". . . preparations containing 100 mcg or more of estrogen were associated with a higher risk of thromboembolism. . ."† The incidence of these side effects decreases as the dosage of estrogen decreases to 50 mcg, as demonstrated in British studies.†

†See Prescribing Information

a step in the right direction

Ortho-Novum 1/50 TRADEMARK 21 and 28-day regimens

Each yellow tablet contains 1 mg norethindrane and 0.05 mg mestranal.
Each green tablet in the 28-day regimen contains inert ingredients.

§Serious as well as minor side effects have been reported with the use of oral contraceptives. These include thromboembolic disease. The physician should remain alert to the earliest manifestations of any symptoms of serious disease and discontinue oral contraceptive therapy when appropriate. The physician should be fully aware of the complete Prescribing Information for this product.

See the complete Prescribing Information for this product,
a summary of which is on the next page.
© Ortho Pharmaceutical Corporation 1978

OJ 129

ORTHO-NOVUM* Tablets

IMPORTANT NOTE—This information is a BRIEF SUMMARY of the complete prescribing information provided with the product and therefore should not be used as the basis for prescribing the product. This summary was prepared by deleting from the complete prescribing information certain text, tables, and references. The physician should be thoroughly familiar with the complete prescribing information and patient information before prescribing the product.

INDICATION: CONTRACEPTION. The pregnancy rate in women using conventional combination oral contraceptives (containing 35 mcg or more of ethinyl estradiol or 50 mcg or more of mestranol) is generally reported as less than one pregnancy per 100 woman-years of use. Slightly higher rates (somewhat more than one pregnancy per 100 woman-years of use) are reported for some combination products containing 35 mcg or less of ethinyl estradiol, and rates on the order of three pregnancies per 100 woman-years are reported for the progestogen-only oral contraceptives. Table 1 gives ranges of pregnancy rates reported in the literature for other means of contraception. The efficacy of these means of contraception (except the IUD) depends upon the degree of adherence to the method.
Table 1: Pregnancies Per 100 Women-Years. IUD, less than 1-6, Diaphragm with spermicidal product (creams or jellies), 2-20; Condom, 3-36, Aerosol foams, 2-29; Jellies and creams, 4-36; Periodic abstinence (rhythm) all types, less than 1-47; 1. Calendar method, 14-47; 2. Temperature method, 1-20; 3. Temperature method—intercourse only in postovulatory phase, less than 1-7; 4 Mucus method, 1-25, No contraception, 60-80. **DOSE-RELATED RISK OF THROMBOEMBOLISM FROM ORAL CONTRACEPTIVES:** Two studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. For this reason, it is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive product prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance. It is recommended that new acceptors of oral contraceptives be started on preparations containing .05 mg or less of estrogen.
CONTRAINDICATIONS: Oral contraceptives should not be used in women with any of the following conditions: 1. Thrombophlebitis or thromboembolic disorders. 2. A past history of deep vein thrombophlebitis or thromboembolic disorders. 3. Cerebral vascular or coronary artery disease. 4 Known or suspected carcinoma of the breast. 5. Known or suspected estrogen-dependent neoplasia. 6. Undiagnosed, abnormal genital bleeding. 7 Known or suspected pregnancy (see WARNINGS, No. 5).

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. This risk increases with age and with heavy smoking [15 or more cigarettes per day] and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.
The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. THROMBOEMBOLIC DISORDERS AND OTHER VASCULAR PROBLEMS. An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well established. Four principal studies in Great Britain and three in the United States have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic. These studies estimate that users of oral contraceptives are 4 to 11 times more likely than nonusers to develop these diseases without evident cause. Overall excess mortality due to pulmonary embolism or stroke is on the order of 1.0 to 3.5 deaths annually per 100,000 users and increases with age. **CEREBROVASCULAR DISORDERS:** In a collaborative American study of cerebrovascular disorders in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than in nonusers and the risk of thrombotic stroke was 4.0 to 9.5 times greater in users than in nonusers.
MYOCARDIAL INFARCTION: An increased risk of myocardial infarction associated with the use of oral contraceptives has been reported confirming a previously suspected association. These studies, conducted in the United Kingdom, found, as expected, that the greater the number of underlying risk factors for coronary artery disease (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia), the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor. The annual excess case rate (increased risk) of myocardial infarction (fatal and nonfatal) in oral contraceptive users was estimated to be approximately 7 cases per 100,000 women users in the 30-39 age group and 67 cases per 100,000 women users in the 40-44 age group. In terms of relative risk, it has been estimated that oral contraceptive users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are also smokers have about a 5-fold increased risk of fatal infarction compared to users who do not smoke, but about a 10-to 12-fold increased risk compared to nonusers who do not smoke. Furthermore, the amount of smoking is also an important factor. In determining the importance of these relative risks, however, the baseline rates for various age groups must be given serious consideration. The importance of other predisposing conditions mentioned above in determining relative and absolute risks has not as yet been quantified; it is quite likely that the same synergistic action exists, but perhaps to a lesser extent. **Risk of Dose:** In an analysis of data derived from several national adverse reaction reporting systems, British investigators concluded that the risk of thromboembolism including coronary thrombosis is directly related to the dose of estrogen used in oral contraceptives. Preparations containing 100 mcg or more of estrogen were associated with a higher risk of thromboembolism than those containing 50-80 mcg of estrogen. Their analysis did suggest, however, that the quantity of estrogen may not be the sole factor involved. This finding has been confirmed in the United States. Careful epidemiological studies to determine the degree of thromboembolic risk associated with progestogen-only oral contraceptives have not been performed. Cases of thromboembolic disease have been reported in women using these products, and they should not be presumed to be free of excess risk. The risk of thromboembolic and thrombotic disorders, in both users and nonusers of oral contraceptives, increases with age. Oral contraceptives are, however, an independent risk factor for these events. **ESTIMATE OF EXCESS MORTALITY FROM CIRCULATORY DISEASES:** A large prospective study carried out in the United Kingdom estimated the mortality rate per 100,000 women per year from diseases of the circulatory system for users and nonusers of oral contraceptives according to age, smoking habits, and duration of use. The overall excess death rate annually from circulatory diseases for oral contraceptive users was estimated to be 20 per 100,000 (ages 15-34—5/100,000; ages 35-44—33/100,000; ages 45-49—140/100,000), the risk being concentrated in older women, in those with a long duration of use, and in cigarette smokers. It was not possible, however, to examine the interrelationships of age, smoking, and duration of use, nor to compare the effects of continuous versus intermittent use. Although the study showed a 10-fold increase in death due to circulatory diseases in users for five or more years, all of these deaths occurred in women 35 or older. Until larger numbers of women under 35 with continuous use for five or more years are available, it is not possible to assess the magnitude of the relative risk for this younger age group. This study reports that the increased risk of circulatory diseases may persist after the pill is discontinued. Another study published at the same time confirms a previously reported increase of mortality in pill users from cardiovascular disease. The available data from a variety of sources have been analyzed to estimate the risk of death associated with various methods of contraception. The estimates of risk of death for each method include the combined risk of the contraceptive method (e.g., thromboembolic and thrombotic disease in the case of oral contraceptives) plus the risk attributable to pregnancy or abortion in the event of method failure. This latter risk varies with the effectiveness of the contraceptive method. The findings of this analysis are shown in Figure 1 below. The study concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke. (The rates given for pill only/smokers for each age group are for smokers as a class. For "heavy" smokers [more than 15 cigarettes a day], the rates given would be about double; for "light" smokers [less than 15 cigarettes a day], about 50 percent.) The mortality associated with oral contraceptive use in nonsmokers over 40 is higher than with any other method of contraception in that age group. The lowest mortality is associated with the condom or diaphragm backed up by early abortion. The risk of thromboembolic and thrombotic disease associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia and especially by cigarette smoking. The risk of myocardial infarction in oral contraceptive users is substantially increased in women age 40 and over, especially those with other risk factors. The use of oral contraceptives in women in this age group is not recommended. Based on the data currently available, the following chart gives a gross estimate of the risk of death from circulatory disorders associated with the use of oral contraceptives:

SMOKING HABITS AND OTHER PREDISPOSING CONDITIONS—RISK ASSOCIATED WITH USE OF ORAL CONTRACEPTIVES

Age	Below 30	30-39	40+	
Heavy smokers	C	B	A	A—Use associated with very high risk
Light smokers	D	C	B	B—Use associated with high risk
Nonsmokers (no predisposing conditions)	D	C,D	C	C—Use associated with moderate risk
Nonsmokers (other predisposing conditions)	C	C,B	B,A	D—Use associated with low risk.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders (e.g., thrombophlebitis, pulmonary embolism, cerebrovascular insufficiency, coronary occlusion, retinal thrombosis, and mesenteric thrombosis). Should any of these occur or be suspected, the drug should be discontinued immediately. A four- to six-fold increased risk of postsurgery thromboembolic complications has been reported in oral contraceptive users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization. 2. OCULAR LESIONS. There have been reports of neuro-ocular lesions such as optic neuritis or retinal thrombosis associated with the use of oral contraceptives. Discontinue oral contraceptive medication if there is unexplained, sudden or gradual, partial or complete loss of vision; onset of proptosis or diplopia; papilledema, or retinal vascular lesions and institute appropriate diagnostic and therapeutic measures. 3. CARCINOMA. Long-term continuous administration of either natural or synthetic estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver. Certain synthetic progestogens, none currently contained in oral contraceptives, have been noted to increase the incidence of mammary nodules, benign and malignant, in dogs. In humans, three case control studies have reported an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women. One publication reported on the first 21 cases submitted by physicians to a registry of cases of adenocarcinoma of the endometrium in women under 40 on oral contraceptives. Of the cases found in women without predisposing risk factors for adenocarcinoma of the endometrium (e.g., irregular bleeding at the time oral contraceptives were first given, polycystic ovaries), nearly all occurred in women who had used a sequential oral contraceptive. These products are no longer marketed. No evidence has been reported suggesting an increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives. Several studies have found no increases in breast cancer in women taking oral contraceptives or estrogens. One study, however, while also noting no overall increased risk of breast cancer in women treated with oral contraceptives, found an excess risk in the subgroups of oral contraceptive users with documented benign breast disease. A reduced occurrence of benign breast tumors in users of oral contraceptives has been well-documented. In summary, there is at present no confirmed evidence from human studies of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of all women taking oral contraceptives is, nevertheless, essential. In all cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease or abnormal mammograms should be monitored with particular care if they elect to use oral contraceptives instead of other methods of contraception.

Figure 1. Estimated annual number of deaths associated with control of fertility and no control per 100,000 nonsterile women, by regimen of control and age of woman.

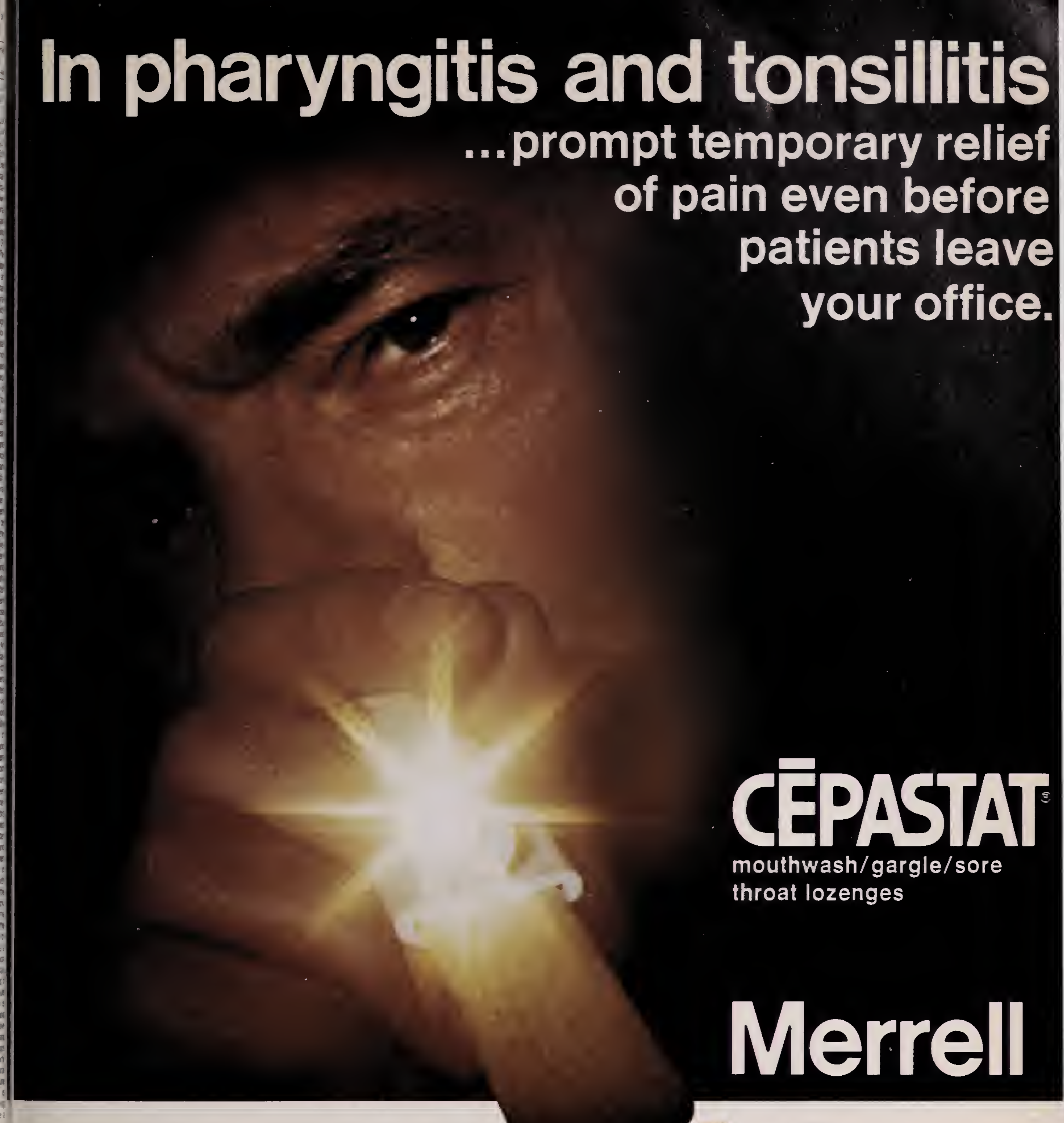
	15-19	20-24	25-29	30-34	35-39	40-44
No method	5.5	5.2	7.1	14.0	19.3	21.9
Abortion only	2.3	2.5	2.5	5.2	9.8	6.6
Pill only-nonsmokers	1.3	1.4	1.4	2.2	4.5	3.1
Pill only-smokers	1.5	1.6	1.6	10.8	13.4	58.9
IUDs only	1.1	1.2	1.2	1.4	1.6	1.4
Traditional contraception only	1.1	1.4	1.9	3.7	4.7	4.0
Traditional contraception and abortion	0.3	0.4	0.4	0.8	1.4	0.8

4. HEPATIC TUMORS. Benign hepatic adenomas have been found to be associated with the use of oral contraceptives. One study showed that oral contraceptive formulations with high hormonal potency were associated with a higher risk than lower potency formulations. Although benign, hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage. This has been reported in short-term as well as long-term users of oral contraceptives. Two studies relate risk with duration of use of the contraceptive, the risk being much greater after four or more years of oral contraceptive use. While hepatic adenoma is a rare lesion, it should be considered in women presenting abdominal pain and tenderness, abdominal mass or shock. A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time. 5. USE IN OR IMMEDIATELY PRECEDING PREGNANCY, BIRTH DEFECTS IN OFFSPRING, AND MALIGNANCY IN FEMALE OFFSPRING. The use of female sex hormones—both estrogenic and progestational agents—during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated to be on the order of 1 to 4 in 1000 exposures. Although there is no evidence at the present time that oral contraceptives further enhance the risk of developing this type of malignancy, such patients should be monitored with particular care if they elect to use oral contraceptives instead of other methods of contraception. Furthermore, a high percentage of such exposed women (from 30 to 90%) have been found to have epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether this condition is a precursor of vaginal malignancy. Male children so exposed may develop abnormalities of the urogenital tract. Although similar data are not available with the use of other estrogens, it cannot be presumed that they would not induce similar changes. An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of sex hormones, including oral contraceptives, in pregnancy. One case control study has estimated a 4.7-fold increase in risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormonal withdrawal tests for pregnancy or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than one in 1,000 live births. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. There is some evidence that triploidy and possibly other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives. Embryos with these anomalies are virtually always aborted spontaneously. Whether there is an overall increase in spontaneous abortion of pregnancies conceived soon after stopping oral contraceptives is unknown. Pregnancy should be ruled out before initiating or continuing the contraceptive regimen. Pregnancy should always be considered if withdrawal bleeding does not occur. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed in the light of these risks. It is also recommended that women who discontinue oral contraceptives with the intent of becoming pregnant use an alternate form of contraception for a period of time before attempting to conceive. Many clinicians recommend three months although no precise information is available on which to base this recommendation. The administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy. 6. GALLBLADDER DISEASE. Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives and estrogens. In one study, an increased risk appeared after two years of use and doubled after four or five years of use. In one of the other studies, an increased risk was apparent between six and twelve months of use. 7. CARBOHYDRATE AND LIPID METABOLIC EFFECTS. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. For this reason, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives. An increase in triglycerides and total phospholipids has been observed in patients receiving oral contraceptives. 8. ELEVATED BLOOD PRESSURE. An increase in blood pressure has been reported in patients receiving oral contraceptives. In some women hypertension may occur within a few months of beginning oral contraceptive use. In the first year of use, the prevalence of women with hypertension is low in users and may be no higher than that of a comparable group of nonusers. The prevalence in users increases, however, with longer exposure, and in the fifth year of use is two and a half to three times the reported prevalence in the first year. Age is also strongly correlated with the development of hypertension in oral contraceptive users. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure when given oral contraceptives. Hypertension that develops as a result of taking oral contraceptives usually returns to normal after discontinuing the drug. 9. HEADACHE. The onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives and evaluation of the cause. 10. BLEEDING IRREGULARITIES. Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, as in all cases of irregular bleeding from the vagina, nonfunctional causes should be borne in mind. In undiagnosed persistent or recurrent abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy. If pathology has been excluded, time or a change to another formulation may solve the problem. Changing to an oral contraceptive with a higher estrogen content, while potentially useful in minimizing menstrual irregularity, should be done only if necessary since this may increase the risk of thromboembolic disease. Women with a past history of oligomenorrhea or secondary amenorrhea or young women without regular cycles may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives. Women with these preexisting problems should be advised of this possibility and encouraged to use other contraceptive methods. Postuse anovulation, possibly prolonged, may also occur in women without previous irregularities. 11. ECTOPIC PREGNANCY. Ectopic as well as intrauterine pregnancy may occur in contraceptive failures. 12. BREAST FEEDING. Oral contraceptives given in the postpartum period may interfere with lactation. There may be a decrease in the quantity and quality of the breast milk. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The effects, if any, on the breast-fed child have not been determined. If feasible, the use of oral contraceptives should be deferred until the infant has been weaned. **PRECAUTIONS: General:** 1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another physical examination being performed. 2. Under the influence of estrogen-progestogen preparations, preexisting uterine leiomyomata may increase in size. 3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree. Patients becoming significantly depressed while taking oral contraceptives should stop the medication and use an alternate method of contraception in an attempt to determine whether the symptom is drug-related. 4. Oral contraceptives may cause some degree of fluid retention. They should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated by fluid retention, such as convulsive disorders, migraine syndrome, asthma, or cardiac or renal insufficiency. 5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice while receiving oral contraceptive therapy. If jaundice develops in any patient receiving such drugs, the medication should be discontinued. 6. Steroid hormones may be poorly metabolized in patients with impaired liver function and should be administered with caution in such patients. 7. Oral contraceptive users may have disturbances in normal tryptophan metabolism which may result in a relative pyridoxine deficiency. 8. Serum folate levels may be depressed by oral contraceptive therapy. Since the pregnant woman is predisposed to the development of folate deficiency and the incidence of folate deficiency increases with increasing gestation, it is possible that if a woman becomes pregnant shortly after stopping oral contraceptives, she may have a greater chance of developing folate deficiency and complications attributed to this deficiency. 9 The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted. 10. Certain endocrine and liver function tests and blood components may be affected by estrogen-containing oral contraceptives: a. Increased sulfobromophthalein retention. b Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3, increased norepinephrine-induced platelet aggregability. c. Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by protein-bound iodine (PBI), T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG, free T4 concentration is unaltered. d. Decreased pregnanediol excretion. e. Reduced response to metyrapone test. **INFORMATION FOR THE PATIENT: [See Patient Package Insert]. DRUG INTERACTIONS:** Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, and ampicillin. **CARCINOGENESIS, PREGNANCY, NURSING MOTHERS: See CONTRAINDICATIONS and WARNINGS. ADVERSE REACTIONS:** An increased risk of the following serious adverse reactions has been associated with the use of oral contraceptives (see WARNINGS): Thrombophlebitis. Pulmonary embolism. Coronary thrombosis. Cerebral thrombosis. Cerebral hemorrhage. Hypertension. Gallbladder disease. Liver tumors. Congenital anomalies. There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: Mesenteric thrombosis. Neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis. The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug-related: Nausea, usually the most common adverse reaction. Vomiting, occurs in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally. Gastrointestinal symptoms (such as abdominal cramps and bloating). Breakthrough bleeding. Spotting. Change in menstrual flow. Dysmenorrhea. Amenorrhea during and after treatment. Temporary infertility after discontinuance of treatment. Edema. Chloasma or melasma which may persist. Breast changes: tenderness, enlargement, and secretion. Change in weight (increase or decrease). Change in cervical erosion and cervical secretion. Possible diminution in lactation when given immediately postpartum. Cholestatic jaundice. Migraine. Increase in size of uterine leiomyomata. Rash (allergic). Mental depression. Reduced tolerance to carbohydrates. Vaginal candidiasis. Change in corneal curvature (steepening). Intolerance to contact lenses. The following adverse reactions have been reported in users of oral contraceptives, and the association has been neither confirmed nor refuted: Premenstrual-like syndrome. Cataracts. Changes in libido. Chorea. Changes in appetite. Cystitis-like syndrome. Headache. Nervousness. Dizziness. Hirsutism. Loss of scalp hair. Erythema multiforme. Erythema nodosum. Hemorrhagic eruption. Vaginitis. Porphyria. Impaired renal function. (ORTHO-NOVUM 1/50□21 and ORTHO-NOVUM 1/50□28 contain tartrazine. Allergic reactions have been reported with the ingestion of this dye in some patients.) **ACUTE OVERDOSE:** Serious ill effects have not been reported following acute ingestion of large doses of oral contraceptives by young children. Overdosage may cause nausea, and withdrawal bleeding may occur in females.

---

*Trademark

Ortho Pharmaceutical Corporation • Raritan, N J 08869


In pharyngitis and tonsillitis
...prompt temporary relief of pain even before patients leave your office.
CĒPASTAT®
mouthwash/gargle/sore throat lozenges
Merrell

'roven Anesthetic :ffectiveness

praying the throat with CĒPASTAT rings soothing relief within minutes. our patients will appreciate this relief hile waiting for therapeutic measures) take hold. The well-established nesthetic effects of CĒPASTAT pro- ide soothing temporary anesthesia to ie irritated or inflamed oropharyngeal iucosa.

:ĒPASTAT in your reatment room . . .

sed as a spray, CĒPASTAT is more kely to deliver the most relief to the ainful area of the throat.

Suit the product to the patient . . .

The liquid is best for use at home as a spray or gargle. Lozenges are ideal for patients on the go.

A recommendation is best . . .

It costs less. Keeps the emphasis where you want it . . . on more important counter-measures — your prescription for anti-infectives, for example.

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati Ohio 45215

CĒPASTAT
anesthetic antiseptic
CĒPASTAT
mouthwash gargle
anesthetic antiseptic
CĒPASTAT
sore throat lozenges
anesthetic antiseptic cooling
Merrell

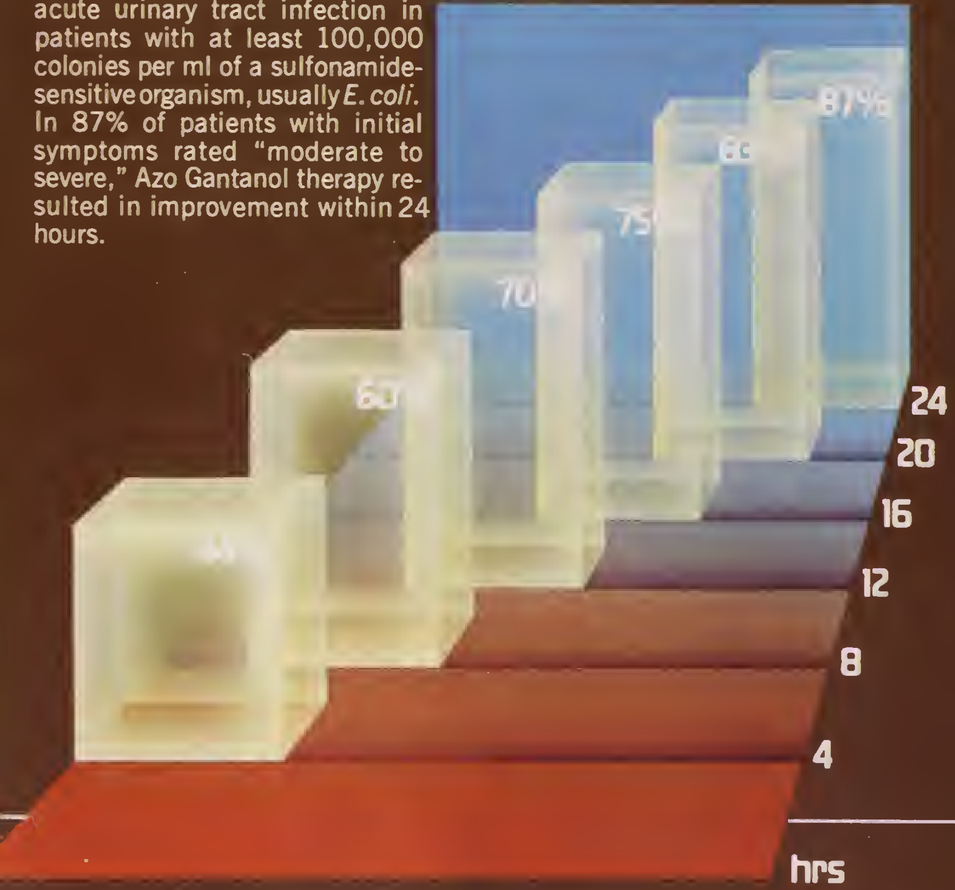
relief of minor sore throat when patients want it . stat

3983 (Y572A)

Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for
the pain

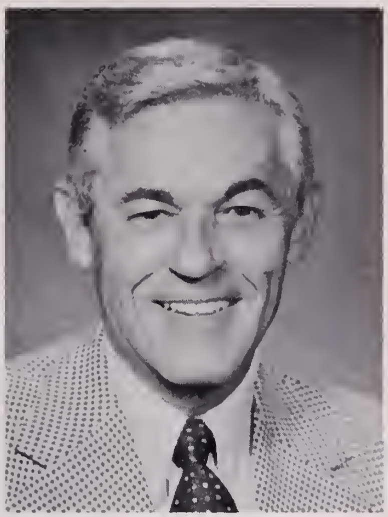
for
the pathogens

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

Before prescribing, please consult complete pro uct information, a summary of which follows:
Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organis (usually *E. coli, Klebsiella-Aerobacter, Staphylo coccus aureus, Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note: Ca fully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; a aminobenzoic acid to follow-up culture media. increasing frequency of resistant organisms lim the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels a variations may occur; 20 mg/100 ml should be maximum total level.
Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term a during nursing period; because Azo Gantanol c tains phenazopyridine hydrochloride it is contr dicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G disturbances.
Warnings: Safety during pregnancy not establis Deaths from hypersensitivity reactions, agranul tosis, aplastic anemia and other blood dyscrasi have been reported and early clinical signs (so throat, fever, pallor, purpura or jaundice) may dicate serious blood disorders. Frequent CBC a urinalysis with microscopic examination are rec ommended during sulfonamide therapy.
Precautions: Use cautiously in patients with im paired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria an stone formation.
Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia leukopenia, hemolytic anemia, purpura, hypop thrombinemia and methemoglobinemia); *aller reactions* (erythema multiforme, skin eruption Stevens-Johnson syndrome, epidermal necroly urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbita edema, conjunctival and scleral injection, pho sensitization, arthralgia and allergic myocardit *G.I. reactions* (nausea, emesis, abdominal pai hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, periphe neuritis, mental depression, convulsions, atax hallucinations, tinnitus, vertigo and insomnia *miscellaneous reactions* (drug fever, chills, to nephrosis with oliguria and anuria, periarteriti nodosa and L. E. phenomenon). Due to certai chemical similarities with some goitrogens, di uretics (acetazolamide, thiazides) and oral hy glycemic agents, sulfonamides have caused r instances of goiter production, diuresis and h glycemia. Cross-sensitivity with these agents exist.
Dosage: Azo Gantanol is intended for the acu painful phase of urinary tract infections. *Usua adult dosage:* 2 Gm (4 tabs) initially, then 1 (2 tabs) B.I.D. for up to 3 days. If pain persis causes other than infection should be sought After relief of pain has been obtained, contin treatment with Gantanol (sulfamethoxazole) be considered.
NOTE: Patients should be told that the orang dye (phenazopyridine HCl) will color the urin
Supplied: Tablets, red, film-coated, each con ing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 50

ROCHE
Roche Laboratories
Division of Hoffmann-La Roch
Nutley, New Jersey 07110

President's Message



John N. Martin, M.D.

VOLUNTARISM

Sometime during this new year, we all will volunteer for some cause, be it the church or community, and we will do it and do it well. Missouri physicians believe in what Abraham Lincoln said, "You cannot escape the responsibility of tomorrow by evading it today."

The real worry about voluntarism to me is our government. *They* — the congress, the administration and the bureaucrats — tell us to develop a voluntary plan or *they* — the congress, the administration and the bureaucrats — will make it mandatory. So, who decides between voluntary and mandatory? *They* — the congress, the administration and the bureaucrats — that's who, and it is they who irritate one.

I like what La Pasionaria wrote, "It is better to die on your feet than to live on your knees."

I also like Gilbert Chesterton's quote, "'My country right or wrong' is like saying 'my mother drunk or sober.'"

"Without your help . . . I simply would not have made it through medical school"

(The following letter was received from a physician who, as a student, received financial assistance from the Missouri State Medical Association members who have contributed to the Missouri State Medical Foundation. It is printed with his permission.)

Dear Doctor:

"Thank you very much for your thoughtful letter concerning receipt of my final payment on my medical student loan.

"I can well remember the feeling of destitution associated with being a reasonably good student but lacking funds with which to enroll for the next semester in medical school. Having always been, perhaps, more than adequately endowed with pride, it was a lesson in discipline and humility to go seeking financial assistance. However, the effort brought me in contact with some very nice people who really do a lot to keep one's faith in human nature alive.

"I sincerely appreciate the efforts which you and others put into the Missouri State Medical Foundation and all other student loan funds. You should feel a quiet heroism for the assistance you lend to needy students . . . without your help, I simply would not have made it through medical school."

The Missouri State Medical Foundation—MSMF—was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

Send a Check Today to MSMF!

MISSOURI STATE MEDICAL FOUNDATION

113 Madison St., Jefferson City, Missouri 65101

• SPONSORED BY THE MISSOURI STATE MEDICAL ASSOCIATION •

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 501(c)(3). Individuals may deduct up to 30% of their adjusted gross income for contributions made to the MSMF.

MSMA Auxiliary

'Speak Up for Children'

The Privilege of Doing has been the theme for the 1978-1979 MSMA Auxiliary year. Noting that 1979 has been designated as the International Year of the Child (IYC), the Auxiliary's many years of "doing" and efforts on behalf of the health and welfare of children take on an added dimension. These auxiliary programs have accelerated in recent years and it is anticipated that they will continue to do so.

Mrs. A. J. Campbell
President

At the Interim Meeting of the AMA House of Delegates last month, the AMA endorsed the American Academy of Pediatrics' "Speak Up for Children" program as a prime health care initiative during the IYC year and calls upon the members of the medical profession and all other segments of society to assist in the attainment of the program's goals. The program focuses most directly on the four following subjects:

Accident Prevention — because accidents are the greatest cause of suffering and death among American children.

Nutrition — because good nutrition starting at conception and continuing through adulthood is basic to a healthy, productive life.

Immunization — because children must be protected against supposedly "conquered" diseases still capable of producing epidemics.

Health Education — because effective health education for children, adolescents and their families can contribute to happier, healthier and more productive lives.

In regard to immunization, you will recall that this is the fourth year in which the auxiliary has cooperated with the MSMA and the Missouri Division of Health in providing educational materials and record booklets for individual Missouri physicians to send to their patients. In addition, we have provided educational material for the new mother in an effort to achieve the goal of immunization of every child.

The Auxiliary also will continue to enthusiastically support programs for accident prevention, nutrition and health education for children.

Every year is the year of the child where the MSMA Auxiliary is concerned. Please share your concern about the welfare of children with your auxiliary and afford us the opportunity to be even more effective. We want to share in *The Privilege of Doing*.

County Society News

FIRST DISTRICT

COUNCILOR
RICHARD C. HEDGES, M.D.
EXCELSIOR SPRINGS

BUCHANAN COUNTY MEDICAL SOCIETY

Dr. Carl K. Ness, anesthesiologist, became the 76th president of the Buchanan County Medical Society at the 75th annual meeting and installation of the Society on Dec. 8, 1978. The event included a dinner dance at the Swiss Chalet in St. Joseph.

Dr. Edmund W. Kline, president for the past year, presided and served as installing officer.

Other officers for 1979 who were installed at the meeting included Drs. R. Philip Acuff, president-elect; Gary A. Dyer, vice-president; Robert R. Stuber, secretary; and Eugene G. Wolanski, treasurer.

Dr. Edward M. Stevens began a three-year term on the Board of Censors. Dr. Wallace McDonald and Dr. Ernest E. Wadlow were installed as delegates to the MSMA for three-year terms. Alternate delegates are Drs. Edward M. Beheler, G. Tyson Carpenter, Gerald E. Fox, B. H. Moen, Caryl A. Potter, Jr. and Joseph R. Prokop.

Dr. Joe S. Gunter is on the Committee on Public Policy and Dr. Robert B. Bristow became a five-year member of the Board of Trustees.

Following a tradition of more than 30 years, the retiring president, Dr. Kline, became a member of the Executive Secretary Committee.

Arrangements for the meeting were made by Mrs. Krikor O. Partamian, wife of the Society's program chairman; Mrs. Charles N. Mullican, Auxiliary president; Mrs. Robert L. Corder, Jr., notification chairman. Mrs. Edward H. Andres and Mrs. Thomas J. Young arranged the table decorations.

ROBERT R. STUBER, M.D., *Secretary*

The advertising in
MISSOURI MEDICINE
keeps you informed
and helps pay the
publishing costs!
When the local
representative calls,
tell him you saw
his company's ad in
your journal.

SECOND DISTRICT

COUNCILOR
JOHN H. WALTERSCHEID, M.D.
HANNIBAL

CHARITON-MACON-MONROE-RANDOLPH COUNTY MEDICAL SOCIETY

The Chariton-Macon-Monroe-Randolph County Medical Society held its regular meeting on Dec. 14, 1978 in the Library Conference Room of Woodland Hospital in Moberly.

Members attending the meeting were Drs. Antonio Aguilera, J. I. Bangash, R. L. Bautista, C. C. Cohrs, J. Will Fleming, Jr., L. E. Huber, G. R. Hudson and H. T. Lin, Moberly; F. A. Barnett, Paris; and J. E. Campbell, Macon.

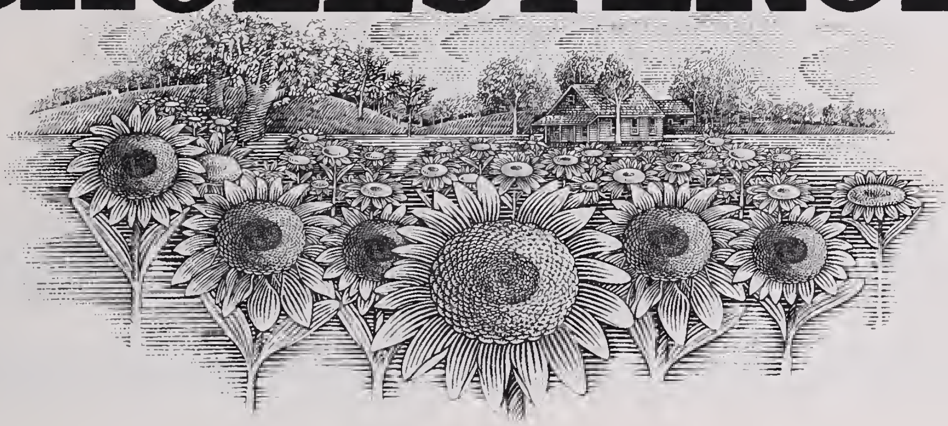
Dr. J. E. Campbell, program chairman, introduced the speaker, Dr. Brent Parker, cardiologist and associate dean of the University of Missouri School of Medicine and chief of the medical staff at the Medical Center in Columbia.

Dr. Parker's subject was "Pulmonary Embolism." He stated that there are 500,000 cases of pulmonary embolism in the United States each year and 50,000 deaths. Fifty percent of the patients dying of heart failure also have pulmonary embolism.

Dr. Parker also discussed the entrance qualifications for medical students at the University of Missouri School of Medicine. He said that three main considerations are emphasized: grades, activities other than academic and the personal interview. He said that all students are Missouri residents and there are no quotas in regard to race, sex, wealth or social status.

G. R. HUDSON, M.D., *Secretary*

GIVE THEM
A TOUGH NEW
DEFENSE AGAINST
CHOLESTEROL.



New Sunflower Farms™ Margarine.

A light, delicious margarine containing pure Sunflower oil. So high in polyunsaturates, it can be more beneficial for patients following a total fat modified diet.

**No cholesterol.
Higher in polyunsaturates
than any corn oil margarine.**

SUNFLOWER
FARMS
MARGARINE
NEW
CONTAINS
GOLDEN SUNFLOWER OIL

WHY SHOULD A PHYSICIAN BE CONCERNED ABOUT HOSPITAL MANAGEMENT?

Because we think it affects your patient's care.

Employee confidence in hospital management improves morale and attitude: two major prescriptions in the care your patients receive.

Shared Service Systems, a non-profit organization of over 90 health care institutions in the Midwest, can provide complete management for your facility including a highly trained administrator and back-up support if and when required.

At Shared Service Systems, our management philosophy is to provide effective modern management to your hospital so that your patients will continue to receive local, cost effective health services.

We thought you should know about us.

for more information contact ·

SHARED SERVICE SYSTEMS
1725 So. 20th Street
Omaha, Nebraska 68108
or Phone: (402) 346-9008

Keeping Patients Comfortable

Keeping you more comfortable, too

When your patient is most comfortable, you are most effective.

Patient comfort, along with your comfort, are prime considerations in this examination table, available to you from Goetze-Niemer.

Places patients in the examination attitudes best fo your work, with least discomfort for you.

Whether you are setting up your first office, or are ready to re-equip...whether you lease or buy, with tim plans available...let Goetze-Niemer's helpful professionals work with you, providing the impression that you want to make to your patients.

GOETZE-NIEMER COMPANY

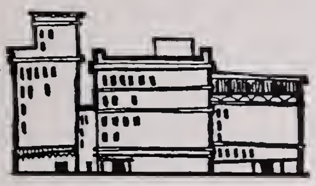
P.O. Box 136—1701 Brooklyn
Kansas City, MO 64141
Phone: 816-231-1900

P.O. Box 187—211 No. 8th
St. Joseph, MO 64502
Phone: 816-279-0804

2611 West Mill St.
Springfield, MO 65802
Phone: 417-865-6511

Frisco Building
Joplin, MO 64801
Phone: 417-624-1040

HOSPITAL AND SURGICAL SUPPLIES—SINCE 1884



NEWS

From the Medical Schools

ST. LOUIS UNIVERSITY

Henry E. Oppenheimer, M.D., associate clinical professor, Department of Internal Medicine, was a recipient of the 1978 St. Louis University Alumni Merit Award, which recognizes alumni for "exemplifying the University Credo to an eminent degree in their daily lives."

Dr. Oppenheimer received his B.S. degree from the University in 1935, his M.D. degree in 1937 and his M.S. degree in internal medicine in 1941. He is a past-president of the Medical Alumni Association of the University.

David Lagunoff, M.D., has been appointed chairman of the Department of Pathology, effective July 1, 1979. A native of Mount Vernon, N.Y., Dr. Lagunoff received his M.D. degree in pathology from the University of Chicago in 1957. He presently serves as professor of pathology at the University of Washington-Seattle. He is a member of the Cellular and Molecular Basis of Disease Review Committee of the National Institute of General Medical Sciences.

Robert E. Burdge, M.D., associate professor of orthopedic surgery, has been appointed to serve as a member of the American Academy of Orthopaedic Surgeons' Committee on Sports Medicine. His three-year term will begin in February.

An expert on sports medicine, Dr. Burdge has served as a member of the Governor's Council for Emergency Medical Services, State of Missouri; president of the Missouri Trauma Society; delegate to the MSMA; and vice-president of the St. Louis Rheumatism Society.

Robert E. Olson, M.D., Ph.D., Alice A. Doisy Professor of Biochemistry and chairman of the department, has been named editor of *Nutrition Reviews*. A renowned authority on nutrition, Dr. Olson was instrumental in establishing a Clinical Research Center at Chiang Mai University, Thailand and was director of that center from 1967 to 1976.

Dr. Olson has served on the editorial boards of the *American Journal of Medicine*, *American Heart Journal*, *American Journal of Clinical Nutrition*, *Circulation Research*, *Biochemical Medicine*, *Molecular and Cellular Cardiology* and *Vitamins and Hormones*.

Henry E. Oppenheimer, M.D. *(right)* accepts the 1978 Alumni Merit Award in Medicine from the Rev. Edward J. Drummond, S.J., St. Louis University president.

Govindaswamy G. Chinnadurai, Ph.D., assistant professor of molecular virology, has been awarded the American Heart Association's Established Investigatorship Award for his study of adenoviruses which may cause cancer. He is the first University faculty member to receive this five-year grant, which provides for a maximum of $28,000 per year.

UNIVERSITY OF MISSOURI-KANSAS CITY

The University of Missouri-Kansas City's six-year BA/MD program was the host for 60 high school counselors and administrators from the high schools of St. Louis and Kansas City on Nov. 28, 1978. The visitors spent the morning at the Medical School hearing about the combined program from students as well as from faculty and administrators. A tour of the Docent Units and other medical building facilities was followed by lunch at the Volker Campus. The visitors spent the afternoon with faculty members from the College of Arts and Sciences. Requirements for admission, the selection process, financial aid and other student-support services were explained. The Minority Recruitment Committee of the Council on Selection is planning a similar day for potential minority candidates and their parents in the spring.

Dean Harry S. Jonas has announced the addition of two new faculty members. *Dr. Lawrence S. Greene* joined the School of Medicine faculty as docent and associate professor of medicine on January 1. Dr. Greene's postfellowship career was in academic medicine at New York Medical College and New York University. In 1972, he assumed the directorship of the Section on Gastroenterology at Booth Memorial Medical Center and also conducted a successful consultation practice in gastroenterology and internal medicine. He is board certified in internal medicine and gastroenterology and is a Fellow, American College of Gastroenterology.

Dr. Norman C. Estes joined the faculty as a member of the Truman Medical Center Department of Surgery. Board certified in surgery, Dr. Estes received his undergraduate education at Bethany College in Lindsborg, Kan. After obtaining his M.D. degree in 1971 from the University of Kansas Medical Center, Dr. Estes remained at the University of Kansas Medical Center for his residency in general surgery. After a two-year period at the University of Kentucky Medical Center in Lexington, Dr. Estes' research interest in cancer immunotherapy brought him back to Kansas City in September, 1978 to team up with UMKC faculty member *Dr. Loren Humphrey*. Presently, Dr. Estes' research involves isolation of tumor antigens and investigation of reactions with serum antibodies in cancer patients. His other clinical research involves a clinical study with a modifice devascularization procedure for bleeding esophageal varices and immune reactivity of peripheral and regional lymphocytes.

UNIVERSITY OF MISSOURI-COLUMBIA

The University of Missouri-Columbia is one of five educational institutions in the nation selected by the Robert Wood Johnson Foundation for financial support of a new fellowship program for training faculty for family medicine.

With a grant of $654,944 for a 42-month period to the Department of Family and Community Medicine at the Medical Center, three physicians will enter the fellowship program annually. In the two-year program, the physicians will undertake training to acquire the research, teaching and additional clinical skills necessary to function as faculty and enlarge the academic base of primary care.

The department is now seeking applicants for these fellowship positions from both recent residency graduates and practicing physicians.

"The rapid growth of family medicine education in the past nine years has created a dire need for more faculty in this field," said *Dr. Jack Colwill*, chairman of department. "There are now more than 5,000 young physicians in residency training in this field at 346 hospitals across the country."

The field is now attracting 15% of each year's medical school graduates across the nation and between 20% and 25% of UMC's medical graduates.

The Department of Family and Community Medicine has designed a two-year core curriculum emphasizing epidemiology, biostatistics and research methodology for its prospective faculty members. Fellows may elect to pursue the Master of Science in Public Health degree offered by the department. At the same time, they work on research projects they also will carry on teaching and patient care responsibilities.

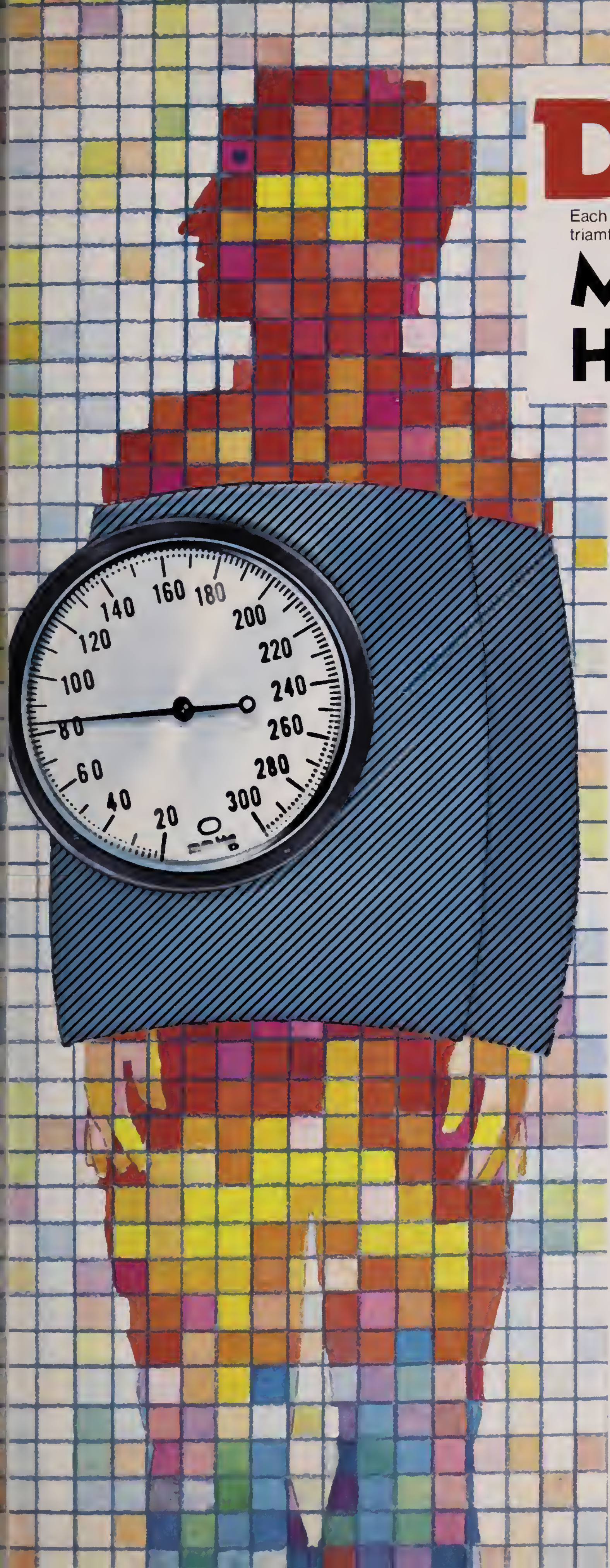
Case Western Reserve University and the state universities of Iowa, Utah and Washington are other institutions supported by the Robert Wood Johnson Foundation in providing these programs.

The Clinical Research Center at the Medical Center has been awarded a $474,153 National Institutes of Health (NIH) renewal grant for the period Dec. 1, 1978 through Nov. 30, 1979.

In operation for 13 years, the Clinical Research Center "is the locus for clinical research in which University of Missouri-Columbia Medical Center patients participate," says *Ted Groshong*, M.D., the center's interim director.

The NIH grant pays the costs of the patient's hospitalization and treatment during the time he is cared for at the center. New approved treatments may be tried at the center by physicians conducting research on specific diseases or conditions. Among these are studies of hyperactivity in children, recurring abdominal pain in children, hypertension, rheumatic diseases (including arthritis), cystic fibrosis and peritoneal dialysis as an alternative to dialysis on a kidney machine and as a treatment for psoriasis. The Center's work with peritoneal dialysis has attracted national attention. The process for cleansing the blood in cases of kidney failure has been improved, and peritoneal dialysis has been found to rid many patients without kidney problems of severe psoriasis.

One of 90 such centers in the United States, the Clinical Research Center in Columbia provides hospital facilities for 46 research projects by Medical Center physicians.



Dyazide®

Each capsule contains 50 mg. of Dyrenium* (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Makes Sense in Hypertension*

Before prescribing, see complete prescribing information in SK&F Co. literature or *PDR.* A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K+ frequently; both can cause K+ retention and elevated serum K+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
a SmithKline company
Carolina, P.R. 00630

When painful spasm
is the presenting
symptom...

. in functional G.I. disorders*

Bentyl®

(dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.

Pylorospasm has almost totally blocked passage of barium meal.

Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-3497 (Y515A)

Bentyl®
(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection
AVAILABLE ONLY ON PRESCRIPTION.

Brief Summary
INDICATIONS
For use as adjunctive therapy in the treatment of peptic ulcer.
IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS/ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC/ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders); and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS

For use in the treatment of infant colic (syrup)

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS. Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis WARNINGS. In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy In this instance treatment with this drug would be inappropriate and possibly harmful Bentyl may produce drowsiness or blurred vision In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy Use with caution in patients with. autonomic neuropathy, hepatic or renal disease, ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon, hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension, hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.
It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate With overdosage, a curare-like action may occur ADVERSE REACTIONS Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response The physician must delineate these Adverse reactions may include xerostomia, urinary hesitancy and retention; blurred vision and tachycardia; palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea; vomiting; impotence, suppression of lactation, constipation, bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation DOSAGE AND ADMINISTRATION Dosage must be adjusted to individual patient's needs
Usual Dosage Bentyl 10 mg capsule and syrup *Adults* 1 or 2 capsules or teaspoonfuls syrup three or four times daily *Children* 1 capsule or teaspoonful syrup three or four times daily *Infants* ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water) Bentyl 20 mg *Adults* 1 tablet three or four times daily Bentyl Injection *Adults* 2 ml. (20 mg) every four to six hours intramuscularly only NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation Treatment should consist of gastric lavage, emetics, and activated charcoal Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used
Product Information as of October, 1976

Merrell
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati Ohio 45215 U S A

New Members

S. Bharath, M.D., U. S. Fort General Leonard Wood Army Hospital, Box 1352, Fort Leonard Wood 65473, has become a member of Mid-Missouri County Medical Society. Dr. Bharath is a native of India, received his preliminary education at Government Arts College and his M.D. degree at Stanley Medical College in 1971. He specializes in gastroenterology.

Albert James Bonebrake, M.D., 304 Professional Bldg., Springfield 65802, has become a member of Greene County Medical Society. Dr. Bonebrake is a native of St. Louis, received his preliminary education at Colorado College and Drury College and his M.D. degree at St. Louis University in 1975. He specializes in obstetrics and gynecology.

Robert Paul Carrell, M.D., 229 Professional Bldg., 609 Cherry, Springfield 65806, has become a member of Greene County Medical Society. Dr. Carrell is a native of Wichita, Kan., received his preliminary education at Northwestern University and his M.D. degree at Kansas University in 1971. He specializes in anesthesiology.

M. Hasan Choudhury, M.D., Mansfield Hospital Annex, Mansfield 65704, has become a member of South Central County Medical Society. Dr. Choudhury is a native of Bangladesh, received his preliminary education at Brahmanbaria College and his M.D. degree at Chittagong Medical College in 1969. He specializes in general practice.

Michael E. Critchlow, M.D., 1012 North Main, Sikeston, has become a member of SEMO County Medical Society. Dr. Critchlow is a native of Cape Girardeau, received his preliminary education at Southeast Missouri State University and his M.D. degree at Vanderbilt University in 1974. He specializes in internal medicine.

Allen Joe Daugird, M.D., NW 500, University of Missouri Medical Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Daugird is a native of Chicago, Ill., received his preliminary education at the University of North Carolina and his M.D. degree at the University of North Carolina in 1977. He specializes in family practice.

Douglas Malcolm Duncan, M.D., 1550 E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. Duncan is a native of Springfield, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1970. He specializes in orthopedics.

Barry Scott Farber, M.D., 609 Cherry, Springfield 65806, has become a member of Greene County Medical Society. Dr. Farber is a native of Tuscaloosa, Ala., received his preliminary education at Texas A&M University and his M.D. degree at Washington University in 1973. He specializes in urology.

John Flint Ferguson, M.D., 232 Professional Bldg., Springfield 65806, has become a member of Greene County Medical Society. Dr. Ferguson is a native of St. Louis, received his preliminary education at Yale University and his M.D. degree at St. Louis University in 1969. He specializes in neurological surgery.

Robert W. Gaines, M.D., University of Missouri Medical Center, Room M-566, Columbia 65201, has become a member of Boone County Medical Society. Dr. Gaines is a native of Dayton, Ohio, received his preliminary education at the University of Cincinnati and his M.D. degree at Duke University in 1967. He specializes in orthopedic surgery.

Bernard Anthony Griesemer, M.D., 3014 J E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. Griesemer is a native of Monett, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1975. He specializes in pediatrics.

Bruce Edgar Harry, M.D., Dept. of Psychiatry, University of Missouri Medical Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Harry is a native of St. Louis, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1977. He specializes in psychiatry.

Max Lee Irick, M.D., 1301 Boonslick, St. Charles 63301, has become a member of St. Charles-Lincoln County Medical Society. Dr. Irick is a native of Huntingburg, Ind., received his preliminary education at Indiana University and his M.D. degree at the University of Kentucky in 1973. He specializes in internal medicine.

Marietta J. Kaylor, M.D., 600 North Busch, Mountain Grove 65711, has become a member of South Central County Medical Society. Dr. Kaylor is a native of Allegan, Mich., received her preliminary education at Andrew's University and her M.D. degree at Loma Linda University in 1966. She specializes in family practice.

Mohammed Vahid Husain Khan, M.D., P. O. Box 1574, Ft. Leonard Wood Army Hospital, Fort Leonard Wood 65473, has become a member of Mid-Missouri Medical Society. Dr. Khan is a native of India, received his preliminary education at Osmania University and his M.D. degree at Dow Medical College in 1955. He specializes in internal medicine.

Narendra K. Khare, M.D., Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Khare is a native of Jhansi, India, received his preliminary education at the University of Bombay and his M.D. degree at Gandhi Medical College in 1967. He specializes in urology.

Norman P. Knowlton, III, M.D., 419 Professional Bldg., 609 Cherry, Springfield 65806, has become a member of Greene County Medical Society. Dr Knowlton is a native of Los Alamos, N. M., received his preliminary education at the University of Colorado and his M.D. degree at St. Louis University in 1975. He specializes in internal medicine.

Myron W. Mizell, M.D., Room 309, Professional Bldg., Springfield 65806, has become a member of Greene County Medical Society. Dr. Mizell is a native of Hannibal, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1971. He specializes is cardiology and internal medicine.

Ronald Wayne Oxenhandler, M.D., M-646 Medical Science Bldg., Columbia 65201, has become a member of Boone County Medical Society. Dr. Oxenhandler is a native of St. Louis, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1972. He specializes in pathology and immunology.

Thomas P. Phillips, M.D., 610 Medical Plaza, 4320 Wornall Rd., Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Phillips is a native of Kirksville, received his preliminary education at the University of Notre Dame and his M.D. degree at St. Louis University in 1973. He specializes in orthopedic surgery.

Hugh John Roddy, M.D., Cox Medical Center, Springfield 65802, has become a member of Greene County Medical Society. Dr. Roddy is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at the University of Missouri in 1971. He specializes in pathology.

Jon Paul Schrage, M.D., M-749 University of Missouri Medical Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Schrage is a native of Milwaukee, Wis., received his preliminary education at the University of Wisconsin and his M.D. degree at the Medical College of Wisconsin in 1975. He specializes in internal medicine and endocrinology.

Philip Roger Shalen, M.D., 1502 E. Broadway, Columbia 65201, has become a member of Boone County Medical Society. Dr. Shalen is a native of New York, N. Y., received his preliminary education at Alfred University and his M.D. degree at New York Medical College in 1968. He specializes in neuroradiology.

Jess S. Simmons, Jr., M.D., 2700 McClelland Blvd., Joplin 64801, has become a member of Jasper County Medical Society. Dr. Simmons is a native of Albia, Iowa, received his preliminary education at Union College and his M.D. degree at Loma Linda University in 1963. He specializes in dermatology.

David S. Sneid, M.D., Menorah Medical Center, 4949 Rockhill, Kansas City 64110, has become a member of Jackson County Medical Society. Dr. Sneid is a native of Chicago, Ill., received his preliminary education at Stanford University and his M.D. degree at Washington University in 1971. He specializes in endocrinology and internal medicine.

Jacob P. Sosna, M.D., 6651 Chippewa, St. Louis 63109, has become a member of St. Louis Medical Society. Dr. Sosna is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at the University of Missouri in 1973. He specializes in internal medicine and infectious diseases.

Noah Leland Still, M.D., 1301 Boonslick, St. Charles 63301, has become a member of St. Charles-Lincoln County Medical Society. Dr. Still is a native of Monticello, Ill., received his preliminary education at Eastern Illinois University and his M.D. degree at the University of Illinois in 1968. He specializes in internal medicine.

Dennis C. Szymanski, M.D., Chief, Div. of Neurosurgery, Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Szymanski is a native of Detroit, Mich., received his preliminary education at the University of Detroit and his M.D. degree at Wayne State University in 1970. He specializes in neurological surgery.

Biong-Suhn Tschoe, M.D., 1035 Bellevue Ave., St. Louis 63117, has become a member of St. Louis Medical Society. Dr. Tschoe is a native of Seoul, Korea, received his preliminary education at Seoul National University and his M.D. degree at Seoul National University in 1962. He specializes in plastic surgery.

Paul M. Vandivort, Jr., M.D., 1221 S. Grand, St. Louis 63104, has become a member of St. Louis Medical Society. Dr. Vandivort is a native of Cape Girardeau, received his preliminary education at Southeast Missouri State University and his M.D. degree at the University of Missouri in 1977. He specializes in psychiatry.

Jaime Vargas, M.D., 1000 Watson Rd., Crestwood 63126, has become a member of St. Louis County Medical Society. Dr. Vargas is a native of Bogota, Colombia, received his preliminary education at Grancolombian Institute and his M.D. degree at the National University of Colombia in 1954. He specializes in psychiatry.

Thomas Von Lintel, M.D., St. Luke's Hospital, 44th and Wornall Rd., Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Von Lintel is a native of Hays, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1974. He specializes in anesthesiology.

Michael Bruce Wooten, M.D., 1211 S. Glenstone, Springfield 65804, has become a member of Greene County Medical Society. Dr.

Wooten is a native of Honolulu, Hawaii, received his preliminary education at Washington State University and his M.D. degree at George Washington University in 1970. He specializes in internal medicine and gastroenterology.

Frederick Robert Zahn, M.D., 311 W. Clayton Rd., Ballwin 63011, has become a member of Franklin-Gasconade-Warren County Medical Society. Dr. Zahn is a native of Durham, N. C., received his preliminary education at Loyola University and his M.D. degree at St. Louis University in 1971. He specializes in emergency medicine.

Mark G. Zukaitis, M.D., 6400 Prospect, Suite 142, Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Zukaitis is a native of Omaha, Neb., received his preliminary education at the University of Notre Dame and his M.D. degree at the University of Nebraska in 1975. He specializes in anesthesiology.

In Memoriam

William B. Wilcoxen, M.D., Bowling Green 63334; a graduate of Washington University, 1927; member of Pike County Medical Society; age 76; died Nov. 13, 1978.

James John Pasco, M.D., 900 S. Adams, Nevada 64772; a graduate of Washington University, 1945; member of West Central County Medical Society; age 56; died Dec. 5, 1978.

SERVING YOU IN MISSOURI

MUNNS
MEDICAL
SUPPLY

9202 Barton
Overland Park, Ks 66214
913-492-5820

635 Hanley Ind. Ct.
St. Louis, Mo. 63144
314-645-0300

Continuing Education Coming Events

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 454-2291
Contact: Ronald G. Evens, M.D.

Feb. 2	City-Wide Radiology Conference — Pediatric Radiology
March 3	City-Wide Radiology Conference — Efficacy Studies in Radiology — The Barium Enema
April 9	City-Wide Radiology Conference
May 14	City-Wide Radiology Conference: Radiology of the Temporomandibular Joint

American College of Physicians
Contact: Thomas W. Burns, M.D., F.A.C.P., University of Missouri, School of Medicine
Columbia 65201

March 29-31	Missouri Regional Meeting (Columbia)

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: Erich W. Pollak, M.D., F.A.C.S., Director of Surgical Education

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds
First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds

University of Missouri-Columbia
M-175 Medical Center, Columbia 65201
(314) 882-2256
Contact: William Bradshaw, M.D., Director

April 9-10	25th Annual Urology Seminar (Crown Center Hotel, Kansas City)

> *The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in* MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
Contact: Loretta Giacoletto

Feb. 15-16	TB Today (Barnes Hospital Complex)
Feb. 22-24	Use of the Laboratory in Clinical Practice (Barnes Hospital Complex)
March-May	Internal Medicine Review (Weekly, day TBA) (Steinbert Auditorium, The Jewish Hospital)
March 1-2	An Update in Renal Diseases Adult and Pediatric Problems in Renal Disease (Barnes Hospital Complex)
March 29-30	Pediatric Neurology: Recent Advances in Diagnosis (Barnes Hospital Complex)
April 19-20	Recent Advances in the Diagnosis and Treatment of Hyperlipidemias
April 23-24	Developmental Deviations in Children and Adolescents
April 26-27	Sixth Annual Symposium on Obstetrics and Gynecology

Greater Kansas City Radiological Society
Contact: G. David Dixon, M.D, President-Secretary
(816) 932-2550

(Afternoon and Evening Sessions)

Feb. 21	Neuroradiology — Use of Metrizamide
March 21	Uroradiology
April 18	Special Procedures

St. John's Mercy Medical Center
615 S. New Ballas Rd., St. Louis 63141
Contact: James G. Blythe, M.D., Chairman, Dept. of Obstetrics and Gynecology

May 10-11	11th Annual Matt Weis Symposium — Surgical Techniques in Obstetrics and Gynecology

niversity of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: Alta Bingham

eb. 9-10	The Long Weekend: Infertility/Endocrinology
eb. 17-24	Winter Traveling Medical Education Course (Maui, Hawaii)
arch 4-10	Late-Winter Traveling Medical Education Course (Scottsdale, Ariz.)
pril 5-7	Perspectives in Medicine
pril 20-21	The Long Weekend: Neurology/Renal Diseases
ay 3-5	Seminar: Update in Obstetrics and Gynecology
May 17-18	Surgical Problems—Old and New
June 7-8	Symposium: Physical Fitness

University of Kansas College of Health Sciences
Division of Continuing Education
Rainbow at Olathe Blvd., Kansas City, Kan. 66103
(913) 588-7130

Feb. 22-23	Gynecology and Obstetrics in the 80s
March 12-14	Pediatrics
March 15-16	Recent Advances in Therapeutics
March 29-30	Sexuality of the Handicapped
April 2-3	Ophthalmology: Ophthalmic Plastic Surgery
April 6-8	Anesthesiology (Crown Center Hotel, Kansas City)
April 23-24	Noninvasive Cardiac Diagnosis
April 25-26	Family Practice (Radisson-Muehlebach, Kansas City)
April 27	Infectious Diseases (Radisson-Muehlebach, Kansas City)

Missouri Chapter, American College of Surgeons
Box 1268, Columbia 65205
(314) 449-4518

June 22-23	Annual Professional Meeting (Alameda Plaza, Kansas City)

★
Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA
Professional Protection Exclusively since 1899

EASTERN MISSOURI OFFICE: Ralph E. Borgmann, Representative
Suite 215, 13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
6908 W. 101st Terrace, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

AMA Scores Congressional Report on Surgery

"The public is being misled by a congressional subcommittee which has charged American physicians with performing unnecessary surgery," said Dr. Tom E. Nesbitt, president of the American Medical Association, in a statement made on Dec. 27, 1978. The subcommittee is apparently seeking to expand the regulation of medicine, but there is no evidence that such regulation will improve quality or reduce the cost of care, he added.

Dr. Nesbitt was commenting on the conclusions of an advance report by the House of Representatives Subcommittee on Oversight and Investigation, which was leaked the previous day to certain reporters.

"The subcommittee based its conclusions on studies which were never intended to be applied to the nation as a whole," Dr. Nesbitt said.

The report repeats charges which were made two years ago and which were repudiated at that time by the AMA and the American College of Surgeons in extensive analyses of the statistics on which the subcommittee based its conclusions.

"The researchers who conducted the studies used by the subcommittee," said Dr. Nesbitt, "specifically said that their conclusions could not be extended to the U. S. as a whole. The studies were of small populations with no attempt to duplicate the statistical make-up of the country. To apply these results to the total American health care industry can only mislead the public. I do not say that there is no unnecessary surgery in the U. S. Doctors are not, after all, infallible, but I do say it is wrong to exaggerate the situation."

Now E Bonds pay 6% interest when held to maturity of 5 years (4½% the first year). Bonds are replaced if lost, stolen or destroyed. When needed, they can be cashed at your bank. Interest is not subject to state or local income taxes, and federal tax may be deferred until redemption.

UNITED STATES SAVINGS BONDS
Take stock in America.

The conclusions of the report, furthermore, cal for mandatory second opinions for all patient advised by their physicians to have surgery.

The AMA is on record as supporting voluntar second opinion programs. The Association ha also long recommended consultation betwee physicians for any difficult medical procedures.

But formal second opinion programs are only i the experimental stages and do not represent th panacea which the subcommittee report make them, according to Dr. Nesbitt. So far, thes programs have only dealt with small numbers o people and a limited number of procedures. Although some surgery has been deferred, the ultimate effect on the patient of this deferral has yet t be assessed.

Data is also not available to indicate how mucl surgery that was initially thought not necessar was eventually performed. Furthermore, man second opinions suggest that additional medica follow-up be performed and then the patient' condition be reviewed for further treatment.

"It appears that the subcommittee, in recommending mandatory second opinion program from Medicare and Medicaid patients, has als applied in this section of its report the limited early results from a few studies to the nation as whole without justification," said Dr. Nesbitt.

The conclusion of the report also called int question the effectiveness of Professiona Standards Review Organizations, even thoug most of these new review bodies have been operational for less than two years and recent evaluations have cited their usefulness.

The conclusions of the report also criticized th AMA in particular and organized medicine i general for their presumed lack of concern for th problem of unnecessary surgery. In reply, Dr Nesbitt pointed out that the AMA has led the wa in developing review criteria for the most commonly performed operations and it has consistently supported peer review mechanisms fo medical and surgical care. The AMA-prepare criteria are used as guidelines in the Professional Standard Review Programs. Peer revie mechanisms are in place in most communities an there is evidence that they are, on the whole working well. In addition, the AMA is currentl under contract with the U. S. Department o Health, Education and Welfare to produc criteria for surgical procedures.

INDEX TO ADVERTISERS

They Help Make MISSOURI MEDICINE *Possible*

ltone Electronics Corporation 36
rroughs Wellcome .... Insert (4-5)

etz-Niemer Company 42

ed S. James & Co. of Missouri, Inc. 13

i Lilly & Company 22

edical Defense Associates 21
edical Protective Company 51
errell-National Laboratories
... 4, Insert (4-5), Insert (36-37), Insert (44-45), 45, 46
OMEDICO 2
unns Medical Supply 49

Ortho Pharmaceutical Corporation ....Insert (36-37)

Pfizer Pharmaceuticals 5
PVO International 41

Roche Laboratories .... 3, Insert (36-37), 55, 56
Roerig .... 12, Insert (12-13)

Shared Service Systems 42
SKF Lab .... Insert (44-45)

The Upjohn Company .... Insert (12-13)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

OCUM TENENS-EMERGENCY MEDICINE— vailable in our 100 hospitals; monthly scheduling is flexible nd according to your preferences; malpractice is paid; exellent hourly income according to your flexibility and hours orked. Call 314-878-2280, Ext. 220 for details.

EMERGENCY PHYSICIAN — We are currently seeking an experienced emergency physician to join the group staffing our progressive ED which serves approximately 36,000 per year and is a vital part of this 700-bed regional health center. Located in the beautiful Ozarks, Springfield is a very clean (150,000 pop.) city offering unlimited recreational opportunities. Attractive fee for service arrangement. Contact Roger Willcox, M.D., St. John's Regional Health Center, 1235 E. Cherokee, Springfield, Missouri 65802. Phone: 417-885-2115.

EMERGENCY MEDICINE PHYSICIAN — 500-bed St. Louis teaching hospital; comfortable patient volume, excellent physician backup. 42-hour/week; minimum guarantee plus profit sharing. Excellent Annual Income plus benefits. Contact Jim Cooper at (314) 878-2280 for details.

FAMILY PRACTICE — Solo Board Certified family practitioner is seeking a family practice associate in growing community 6 miles north of Kansas City International Airport. Contact, Carl M. Myers, M.D., Platte Medical Clinic, Platte City, Mo. 64079. (816) 431-2200.

Scientific Sessions Important to Every Physician!

121st MSMA ANNUAL SESSION

April 19-22, 1979 **St. Louis** **Chase-Park Plaza**

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

Dr. M. Pinson Neal, Columbia, was installed as president of the Mississippi Valley Medical Society at its annual meeting in Quincy, Ill. in November. Dr. Joel W. Hardesty, Hannibal, was named first vice-president. Elected to the Board of Directors were Drs. W. L. Hanson and Q. U. Newell, St. Louis; Edmund Lissack, Concordia; Dan G. Stine, Columbia; and F. E. Sultzman, Hannibal.

Dr. Charles H. Neilson, St. Louis, was appointed to the State Board of Health by Gov. Lloyd C. Stark on December 12 for a term ending on Dec. 12, 1942. Dr. Neilson has served as associate dean of the St. Louis University School of Medicine since 1928 and has been a member of the staff at the University since 1904. Other members of the State Board are Dr. M. B. Clopton, St. Louis; Dr. E. Sanborn Smith, Kirksville; Dr. T. S. Bourke, Kansas City; and Dr. L. P. Forgrave, St. Joseph. State Health Commissioner Harry F. Parker of Jefferson City is secretary of the Board but is not a voting member.

Tularemia has been a subject of considerable interest in the state during the last several weeks. The State Health Commissioner, through the daily and weekly press, has warned Missourians to exercise special care in dressing rabbits and quail and to call a physician whenever symptoms appear.

TWENTY-FIVE YEARS AGO

"*John Sappington, M.D., 1776-1856:* Author of the first medical book written west of the Mississippi, early persistent and effective opponent of the dominant Antiphologistic School, largest user of quinine in America (one order was for 500 pounds). Sappington came from Tennessee to Missouri Territory in 1817, settling near Arrow Rock. His practice grew apace, and within ten years extended from Jefferson City to Lexington. As soon as quinine (isolated in 1820) became available, he recognized that it alone was capable of curing malaria and that the common practice of bleeding and purging were unnecessary and harmful in this prevalent disease."

Dr. Lawrence P. Engel, Kansas City, was elected president-elect and Dr. John H. Mayer, Jr., also of Kansas City, was elected councilor for Missouri at the meeting of the Southwest Surgical Congress in Salt Lake City.

The Marine Hospital Institute in Kirkwood has been awarded to the Sisters of St. Joseph of Carondolet at a 100% discount, effective November 1. The order, which now operates in St. Joseph Hospital in Kansas City, will take charge of the 14 acres and ten buildings with almost 120,000 square feet of floor space. The property has been appraised at nearly $2 million.

TEN YEARS AGO

The West Central Missouri Medical Society met at Glen's Cafe in Butler on October 10. The attendance for the usual social hour, dinner and scientific program was 15. Dr. William Haynie, vice-president, presided. Officers elected for 1969 were Dr. Haynie, Butler, president; Dr. Carter Luter, Butler, vice-president; and Dr. Roy W. Pearse, Jr., Nevada, secretary-treasurer.

It was announced on October 7 that the new $3,000,000 wing addition to the St. Louis University School of Medicine has been named Doisy Hall. The five-story wing was named in honor of the most distinguished professor ever to hold faculty rank at the University — Dr. Edward A. Doisy, Sr., Nobel Laureate Chairman Emeritus of the Edward A. Doisy Department of Biochemistry. Dr. Charles E. Huggins, also a Nobel Prize winner and professor of surgery at the University of Chicago, gave the keynote address at the dedication.

Acknowledgement: Dr. Pollock wishes to express appreciation to the librarians at the University of Missouri-Kansas City Medical Library for making available to him the reference books needed to prepare this column.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

ch tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

ust one tablet b.i.d. for 10 to 14 days

Action at urinary/vaginal/lower bowel sites helps iminate reservoirs of infecting organisms

Distinctive antibacterial action plus wide spectrum elps eradicate recurrent UTI

Low incidence of bacterial resistance in community actice

- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

fore prescribing, please consult complete product informa- on, a summary of which follows:

Indications and Usage: For the treatment of urinary tract fections due to susceptible strains of the following or- nisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus rabilis, Proteus vulgaris, Proteus morganii.* **It is recommended at initial episodes of uncomplicated urinary tract infections treated with a single effective antibacterial agent rather an the combination.** *Note:* The increasing frequency of resis- nt organisms limits the usefulness of all antibacterials, espe- ally in these urinary tract infections.

Also for the treatment of documented *Pneumocystis rinii* pneumonitis. To date, this drug has been tested only in tients 9 months to 16 years of age who were immunosup- essed by cancer therapy.

The recommended quantitative disc susceptibility method *ederal Register,* 37:20527-20529, 1972) may be used to esti- ate bacterial susceptibility to Bactrim. A laboratory report of usceptible to trimethoprim-sulfamethoxazole" indicates an infec- n likely to respond to Bactrim therapy. If infection is confined to e urine, "Intermediate susceptibility" also indicates a likely re- onse. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sul- namides; pregnancy; nursing mothers; infants less than two onths of age.

Warnings: Deaths from hypersensitivity reactions, agran- ocytosis, aplastic anemia and other blood dyscrasias have been ssociated with sulfonamides. Experience with trimethoprim is uch more limited but occasional interference with hematopoiesis as been reported as well as an increased incidence of throm- openia with purpura in elderly patients on certain diuretics, rimarily thiazides. Sore throat, fever, pallor, purpura or jaundice ay be early signs of serious blood disorders. Frequent CBC's re recommended; therapy should be discontinued if a signifi- antly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal r hepatic function, possible folate deficiency, severe allergy or ronchial asthma. In patients with glucose-6-phosphate dehy- rogenase deficiency, hemolysis, frequently dose-related, may ccur. During therapy, maintain adequate fluid intake and perform equent urinalyses, with careful microscopic examination, and enal function tests, particularly where there is impaired renal unction.

Adverse Reactions: All major reactions to sulfonamides and imethoprim are included, even if not reported with Bactrim. *lood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblas- c anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, ypoprothrombinemia and methemoglobinemia. *Allergic reac- ons:* Erythema multiforme, Stevens-Johnson syndrome, eneralized skin eruptions, epidermal necrolysis, urticaria, serum ickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, eriorbital edema, conjunctival and scleral injection, photosensiti- ation, arthralgia and allergic myocarditis. *Gastrointestinal reac- ons:* Glossitis, stomatitis, nausea, emesis, abdominal pains, epatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older.

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

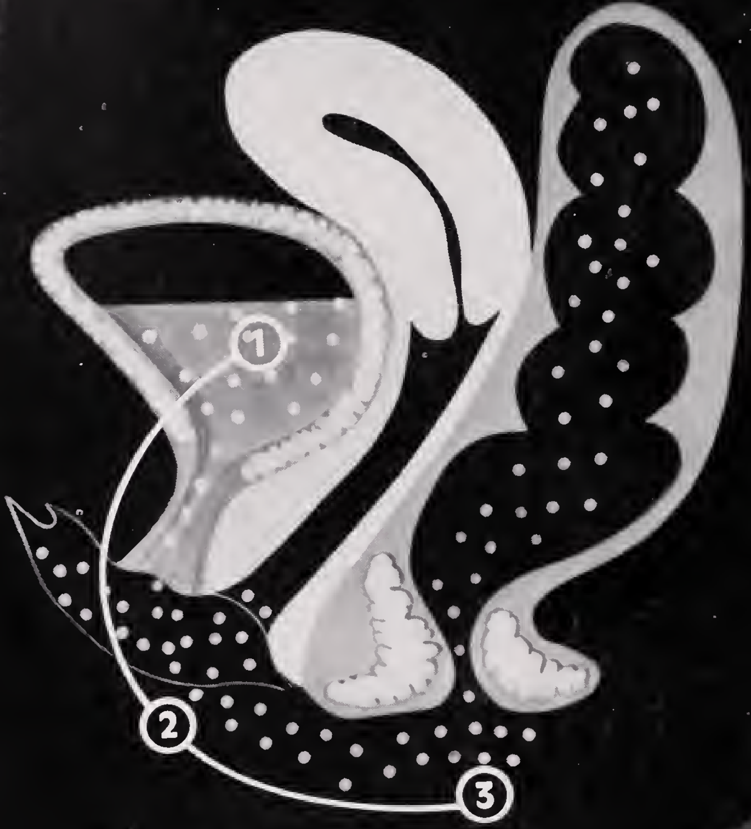
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see back cover.

of Philadelphia, Libr
19 South 22nd Street 1)1)3
Philadelphia 3, Pa.

Her next attack of cystitis may require

the Bactrim™ 3-system counteratta



ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Ente bacteriaceae* in the bowel without the emergence of re tant organisms. Thus, Bactrim reduces the risk of intr colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flor

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal trac

Please see reverse side for summary of product information.

Missouri Medicine

Vol. 76, No. 2 (ISSN 0026-6620) February, 1979

MDS

MSMA Initiates Impaired Physician Assistance Program

1979 Annual Session Preliminary Program

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF
MAR 2 - 1979

On Hearing Aid Recommendation

Photo-Comment by James W. Clawson, M.D., Springfield

Transactions of the Third Interim Session

Carcinoma of the Breast:

The Role of Estrogen and Other Receptor Determinations

MISSOURI STATE MEDICAL ASSOCIATION

Contents Page 60

MOMEDICO

YOUR PROFESSIONAL LIABILITY
INSURANCE COMPANY

prescription
for protection!

Who knows the needs of a physician better than his peers? That's why MOMEDICO was formed **by** doctors **for** doctors.

MOMEDICO is owned by the Missouri State Medical Association and is a **stock** insurance company licensed and regulated under the laws applicable to insurance companies in the State of Missouri. MOMEDICO was formed to provide physician professional liability insurance to MSMA members at a reasonable price.

missouri medical insurance company
100 North Broadway
St. Louis, Missouri 63102

314-241-4774

COMPARE

MOMEDICO

Writes
- **occurrence form**
Professional liability insurance

Is adequately capitalized and
- **financially strong**

Purchase all
- **domestic reinsurance**
for protection

Is a
- **stock insurance company** domiciled in Missouri

Is
- **not assessable**

Has
- **no deductible** for claims

Provides
- **adequate limits**

Offers
- **premises liability**

Includes
- **personal injury coverage**

- May refund premiums with favorable underwriting experience

PERFORMANCE. PROVEN EFFECTIVENESS WITHIN A WIDE SAFETY MARGIN.

LIBRIUM®
10 ROCHE
IUM®
ROCHE

While Roche Laboratories already knows more about the performance of Librium than anyone else, we keep on learning every day.

For example, the highly favorable benefits-to-risk ratio of Librium is a well-documented matter of record.

And, of course, the specific calming action of Librium has been demonstrated in millions of patients around the world. In a large number of these patients, Librium was used concomitantly with other primary medications.

Proven performance within a wide safety margin. Basically, that's what Librium is all about.

LIBRIUM® ⒾⅤ

chlordiazepoxide HCl/Roche

THE ANXIETY-SPECIFIC

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

ROCHE

Roche Products Inc.
Manati, Puerto Rico 00701

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, John N. Martin, M.D., St. Joseph
President-Elect, Andrew McCanse, M.D., Kansas City
Vice-President, Donald A. Fakhoury, M.D., Kansas City
Vice-President, Joseph V. Finnegan, M.D., St. Louis
Vice-President, H. B. Ivy, M.D., Springfield
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, James M. Stokes, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Lily Ann Hanes, M.D., St. Louis
Immediate Past-President, Howard J. McAlhany, M.D., Springfield

DELEGATES TO THE AMA

James C. Sisk, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*
Rae W. Froelich, M.D., Lebanon
Francis X. Lieb, M.D., St. Louis, *Alternate*
Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Donald Judd, M.D., St. Louis, *Alternate*

COUNCILORS

Richard V. Bradley, M.D., St. Louis, *Chairman*
Eugene T. Hansbrough, M.D., Poplar Bluff, *Vice-Chairman*

1st District, Richard C. Hedges, M.D., North Kansas City
  Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
  Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Richard V. Bradley, M.D., St. Louis
  Vice-Councilor, Richard Fallon, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
  Vice-Councilor, Frederick D. Peterson, M.D., St. Louis
5th District, H. Peter Ekern, M.D., Mexico
  Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
  Vice-Councilor, Roy W. Pearse, Jr., M.D., Nevada
7th District, Irving H. Clark, M.D., Kansas City
  Vice-Councilor, Ronald A. Youmans, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
  Vice-Councilor, Marvin Singleton, M.D., Joplin
9th District, Claude W. Cooper, M.D., Thayer
  Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, Eugene T. Hansbrough, M.D., Poplar Bluff
  Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, Wilfred E. Wooldridge, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

Contents for February, 1979

Scientific Articles:

On Hearing Aid Recommendation; Robert L. Cozad, Ph.D., Jerry Templer, M.D. and William E. Davis, M.D. 77

Remember the Allen Test; Charles L. Puckett, M.D., Byron Major, M.D. and Richard Werner, M.D. 81

Operative Obstetrical Intervention as an Element in Lowering Perinatal Mortality; William J. Ott, M.D. and Hubert A. Ritter, M.D. 84

Carcinoma of the Breast: The Role of Estrogen and Other Receptor Determinations; John S. Meyer, M.D., Sue C. Stevens, Ph.D. and Wilma L. White 89

Special Features:

MSMA Annual Session Preliminary Program 71

MSMA Statewide Program Offers Assistance to the Impaired Physician 95

Transactions of the MSMA Third Interim Session 99

News and Features:

MSMA News Round-Up .... Insert (62-63)

Photo-Comment by James W. Clawson, M.D. 66

Editor's Corner 67

President John N. Martin Addresses MSMA House of Delegates 68

President's Message 93

MSMA Auxiliary 94

Editorial 97

In Brief 105

Continuing Education Coming Events ... 106

News From the Medical Schools 108

In Memoriam 109

New Members 110

Index to Advertisers 113

Missouri Medicine in Review 114

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
William M. Hart, M.D., Columbia
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

SAINT LOUIS
SURGICAL SOCIETY

presents the

FIFTY-FIFTH
HODGEN LECTURE

Guest Speaker

ALEXANDER L. WALT, M.D.

Wayne State University
Detroit, Michigan

"Pseudo Cyst of Pancreas;
Variations on the Theme"

Tuesday, March 6, 1979
6:00 P.M.

St. Louis Metropolitan
Medical Society
Auditorium
3839 Lindell Boulevard
St. Louis, Missouri

All members of the Profession are invited

Tenuate® Ⓒ
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633
Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request – Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs. Florence, Italy, Jan. 20-21, 1977.

Merrell

8-3921 (Y587A)

Whether overweight is a complicating factor... or just uncomplicated overweight.

Tenuate® Dospan® Ⓒ IV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

Merrell

For prescribing information see opposite page.

The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions.
However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).

© [illegible] The Upjohn Company

RHEUMATOLOG

Motrin 400 mg TABLETS
ibuprofen, Upjohn

The confidence that comes from experience—
one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

6857 4

The confidence that comes from experience—
one more reason to prescribe

Motrin 400 mg TABLETS
ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

How Supplied

Motrin Tablets, 300 mg (white)	
Bottles of 60	NDC 0009-0733-01
Bottles of 500	NDC 0009-0733-02
Motrin Tablets, 400 mg (orange)	
Bottles of 60	NDC 0009-0750-01
Bottles of 500	NDC 0009-0750-02
Unit-dose package of 100	NDC 0009-0750-06
Unit of Use bottles of 120	NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

NIM-3

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001

ALDOMET®
(METHYLDOPA|MSD)
TABLETS: 500 mg, 250 mg, and 125 mg
MSD
MERCK
SHARP &
DOHME

MSMA

NEWS ROUND - UP

February, 1979

New St. Louis society pledges to restrain costs

St. Louis area physicians have pledged to keep their office, diagnostic and surgical fees below the current rate of increase in the nation's cost of living index, said Dr. George M. Bohigian at the first annual meeting of the St. Louis Metropolitan Medical Society on January 20. Dr. Bohigian is president of the new society.

The society was formed effective January 2, 1979 by the consolidation of the St. Louis Medical Society and St. Louis County Medical Society. At the banquet meeting, Dr. John N. Martin, MSMA president, presented the official Missouri State Medical Association charter to the new metropolitan society.

In addition to Dr. Bohigian, the first officers of the metropolitan society installed January 20 include Drs. Edwin J. Cunningham, Jr., as president-elect; Theodore L. Paletta, vice president; Jill M. Clayton, vice president; Robert R. MacDonald, Jr., secretary and Harry C. Eggleston, secretary. Twenty-four councilors of the society also were installed.

In his inaugural address, Dr. Bohigian said each U.S. Congressman who represents the St. Louis area has been contacted about the physicians' pledge. "I have explained that physician fees account for less than 20 cents of the health care dollar. Most importantly, I have asked that they do their part in the battle against inflation by restraining the Federal Budget."

Dr. John N. Martin, MSMA President, congratulates the new president of the St. Louis Metropolitan Medical Society, Dr. George M. Bohigian.

He urged society members "to develop and pursue our own initiatives against climbing costs.

"We now speak with a united voice representing the physicians of both St. Louis city and county."

Gordon R. Garrett, Ed.D.. formerly executive secretary of the St. Louis Medical Society, is executive director of the metropolitan society, and Mrs. Terry Watson, formerly executive secretary of the St. Louis County Medical Society, is associate executive director.

New Lake of the Ozarks Medical Society receives charter

A new medical society has been formed for the physicians in the Missouri counties of Camden, Miller and Morgan.

At a dinner meeting on January 19, 1979, at Tan-Tar-A, the new Lake of the Ozarks Medical Society received a charter from the Missouri State Medical Association. Dr. John N. Martin, MSMA President, presented the official charter.

It was felt that by uniting the old individual medical societies to form a new tri-county society, members in that area would have the opportunity to become more actively involved in organized medicine and to participate in more continuing medical education programs.

The following new officers have been elected for the Lake of the Ozarks Medical Society: Chris K. Fotopoulos, M.D., Osage Beach, president; Melvin R. Hayden, M.D., Camdenton, secretary; and C. Robert Hall, M.D., Versailles, president-elect.

121st MSMA Annual Session

Preparations are in progress for the 121st Annual Session of the Missouri State Medical Association, April 19-22, 1979, at the Chase-Park Plaza Hotel in St. Louis.

At this year's Annual Session, 36 scientific sessions are planned for the continuing medical education program, the largest number the Association has ever had. The scientific program is approved for Category I CME credit by the MSMA and is also acceptable for prescribed and elective hours by the American Academy of Family Physicians.

Nineteen medical specialites and two voluntary health organizations will sponsor the CME programs. Again this year, there will be a cardiopulmonary resuscitation (CPR) training session on Friday and Saturday.

Dr. Hoyt D. Gardner, AMA President-Elect, will be one of the main speakers at the General Session of the convention at 9 a.m. on Friday, April 20.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

Physicians and legislators meet in Columbia

Physicians from the 12-county MSMA Fifth District met with Missouri legislators from their area on January 18 in Columbia to discuss issues of common concern. Approximately 90 physicians, legislators and their wives and medical students attended the dinner meeting, despite adverse weather conditions.

Dr. H. Peter Ekern, councilor from the Fifth District, hosted the dinner. Dr. Douglas Westoff, president of the Mid-Missouri PSRO Foundation and Dr. William C. Allen, a member of the Area II HSA Governing Body, gave updates on the status of these organizations.

Dr. John I. Matthews, chairman of the MSMA Legislative Committee, presented a concise overview of health legislation coming before the 80th General Assembly.

Pictured are Missouri legislators and their hosts who attended the dinner: (left to right) Dr. Hugh Harris, Dr. Otis Mosely, Dr. George Wilson, Rep. Carrol McCubbin, Rep. Van Donley, Dr. H. Peter Ekern, Rep. Larry Mead and Rep. James Strong.

Bills threaten to impose regulations on physicians

Physicians are well aware of the many attempts to regulate and change the practice of medicine on the Federal level. Those same efforts are now arising in more depth on the state level with the introduction of numerous medically-related bills.

Legislative Committees have already held hearings on bills designed to establish a Certificate-of-Need law in Missouri, license physician's assistants and radiologic technicians, provide a fair hearing for providers under Medicaid, establish a system of state-funded Family Practice Residency Programs, legalize the use and sale of Laetrile, allow direct Medicaid payment of nurses and payment for nurse and physician services in rural clinics.

The Missouri State Medical Association's Committee on Legislative Affairs is following, to varying degrees, more than 130 bills this Session. To date, the MSMA has had physicians testify on 12 bills and has submitted written testimony on eight others. Many additional bills are being watched closely since they could be amended in a manner detrimental to good health care.

MSMA members desiring detailed information on particular bills are invited to contact Headquarters. A partial listing of some of the more important items before the present state General Assembly follows:

SB 52 and HB 222 (Certificate-of-Need) would bring Missouri into compliance with Federal mandates. As introduced, both bills extend CON to physician's offices, but MSMA amendments have deleted this section for the present time.

HB 315 (Medicaid-Nurses) provides for direct payment of Medicaid funds to nurses rather than to the nurse's employer.

SB 57 (Open Formulary) would allow physicians to prescribe any drug for Medicaid patients rather than being limited to a few. SB 169 (Definition of Death) includes brain death as one means of determining death. SB 178 (Fair Hearing), also SB 383, would allow physicians to receive a fair hearing if Medicaid reduces or disallows fee payments. SB 241 (Advertising) amends the Practice Act to better explain the difference between advertising and solicitation.

SB 287 (Chiropractic-Adjunctive Therapy) again would amend law to allow chiropractors to use undefined "adjunctive therapy" rather than be limited to adjustments of the spine "by hand." SB 293 (Family Practice Residencies) would establish a state-funded system of Family Practice Residencies in hospitals throughout the state. HB 217 (Mental Health) would require insurance companies to provide coverage for mental illness on a parity with physical illness.

HB 220 (HMO's) would give the Division of Insurance some controls over HMO's in the state. HB 211 (Medicaid Roundtable) would establish a special advisory committee of providers to provide input into the Division of Family Services. Stronger than current committee. HB 257 (Physician's Assistants) calls for the licensing of physician's assistants. MSMA has requested that the "Delegation Amendment" be substituted. This amendment allows the physicians to determine what and to whom he will delegate duties.

HB 260 (Medicaid-Examine Records) would permit Medicaid officials to examine patients' records without the consent of the patient. HB 354 and HB 387 (Laetrile) would legalize the manufacture, sale and use of Laetrile in Missouri. MSMA considers Laetrile a "substance", not a drug and, if it is to be legalized, it should be sold as such on grocery store shelves and elsewhere. The container should note "poison" on the label.

Action Plan can aid members

At the Interim Session in November, 1978, the House of Delegates approved the following addition to the MSMA Constitution, "Article II, Purpose. The purpose of this Association is the promotion of the science and art of medicine, the protection of the public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association."

This amendment was designed to make the Missouri Action Plan an integral part of our current activities. The Socioeconomic Committee was created so that the Missouri State Medical Association might provide a service for its members. If a physician believes he has been aggrieved against by a third party then this committee will intervene on behalf of the physician if he desires this action. Under no circumstances are we talking about withholding services from patients. Never!

Undoubtedly, the Missouri State Medical Association can prove more effective in dealing with third party carriers than an individual physician. The Action Plan has been developed so that the Missouri State Medical Association can aid its members. The implementation of the plan rests with the individual physician.

Accept no substitute for your professional judgment

As a physician, you have the right to prescribe the drug which you believe will most benefit your patients. Now, substitution laws make it more difficult to exercise that right. In many states, unless you specifically direct pharmacists to dispense your brand-name prescription as written, they may be required by law to substitute another drug for your brand-name prescription.

This means that the ultimate drug selection is no longer yours; its source is left to the pharmacist's discretion. You will have forfeited your right to prescribe as you see fit. Preserve your rights. Specify that you will accept no substitution.

When you accept no substitutes...

- You ensure that your patient receives exactly that product you have specified on your prescription
- You choose the quality of the product dispensed to your patient
- You can exercise the right to select a product based upon its proven therapeutic performance and to select a manufacturer that stands behind its brand name or generic product
- You can support the kinds of research programs that are vital to new drug discovery and development
- You can help sustain important physician, pharmacist and patient education services supported by innovative, research-oriented firms

For complete information on the drug substitution law effective in your state, please consult your local Pfizer Representative

© 1978, Pfizer Inc.

Pfizer PHARMACEUTICALS

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

Lowell G. Bennett
Beltone Hearing Aid Service
318 W. Walnut Street
Springfield, Missouri 65806
(417) 866-0551

Len Gidley
Beltone Kansas City Hearing Aid Service
1001A Grand Avenue
Kansas City, Missouri 64106
(816) 471-1943 (816) 471-4105

Beltone Hearing Aid Service
222 Kirkpatrick Building
St. Joseph, Missouri 64501
(816) 279-6501

Don Hicks
Beltone Hearing Aid Service
North Park Mall
101 Range Line Room 248
Joplin, Missouri 64801
(417) 624-0931

Dean Jones
Beltone Hearing Aid Service
P.O. Box 682 400 E. High
Jefferson City, Missouri 65101
(314) 635-3557

Beltone Hearing Aid Service
21 North 10th
Columbia, Missouri 65201
(314) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Servic
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Servic
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Servic
State Fair Shopping Cente
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

Beltone Hearing Aid Servic
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Servic
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

Beltone Hearing Aid Servic
320 Spring
Sweet Springs, Missouri 65
(816) 335-6727

Beltone WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

STRATEGIC FINANCIAL PLANNING
EXPANDS YOUR HORIZONS

Many health care professionals have discovered an excellent plan to create capital for a variety of uses.

Could you use $10,000 to $100,000+? Take your assets out of limbo and convert them into cash through our sale/leaseback program. Hempel Financial Corporation will buy your office equipment and lease it back to you for payments that are **100% tax-deductible.** Your bank relationships and lines of credit are not affected, and all transactions are strictly confidential. Hempel has virtually unlimited funds to meet the needs of physicians and dentists nationwide. For your free brochure describing our sale/leaseback program, as well as our other financial plans, **call toll-free (800) 421-7177; in California, call collect (213) 475-0304.**

HEMPEL
FINANCIAL CORPORATION
10880 Wilshire Blvd.
Los Angeles, CA 90024

Photo-Comment by James W. Clawson, M.D., Springfield

This is a warm shoulder compared to the one the Kennedy proposals deserve.

Editor's Corner

ALL IN A DAY'S WORK

If a person is a good doctor, he must have a sense of humor. A sense of humor will bolster his public relations and will keep him sane on difficult days.

Thereby, he will be able to enjoy his patients much more and his patients will, in turn, find him a more attractive individual. As a result of this pleasant working relationship, many humorous remarks will come his way and their genuine, hearty humor will far surpass the sorry exhibits of everyday, third-grade level television.

And, so, I pass on to you some prime examples. There will be more of these from time to time because they are so human, and so humorous, they must be shared.

* * *

Minnie Walton has been a faithful, pleasant patient for 20 years. No one could ask for better, except for one thing. Minnie has never really had anything wrong with her, but neither has she ever enjoyed a well day. In fact, Minnie probably wouldn't enjoy a well day at all.

Not long ago, Minnie showed up at the office for her quarterly shot of moral support. She hobbled into the examination room, barely making way and with a pronounced starboard list. This was something new.

With proper ado, we edged Minnie onto the examination table, elevated the head of the table and fetched a pillow. Laboriously, she scootched up on the table and finally lay back with a great sigh.

Then, she smiled wanly and resignedly announced, "You know, doctor, it's my psychiatric nerve."

And Minnie was 100% right.

* * *

My nurse stepped to the waiting room door and called for Mr. Bailey.

An aged, unkempt old man arose and shuffled across the room. All this time, a rather fastidiously dressed man of middle age watched Mr. Bailey with a semi-amused smile.

In due course, Mr. Bailey departed. The other gentleman was summoned. He came into the examination room and asked, "Doctor, when your nurse called for Mr. Bailey, I watched him. I couldn't help but wonder if that was old Bill Bailey . . . and if he ever went home."

* * *

And, my friend, Mr. Benton Dunnegan, banker of Bolivar, Mo., attended a community banquet. Mr. Dunnegan is a very kindly individual, but one of considerable stature thereabouts. He found himself sitting alongside a charming little girl of about nine years.

Evidently, Mr. Dunnegan's reputation had preceded him. Shyly, the little girl looked up and said, "Mr. Dunnegan, I hope you won't ask me many questions because I don't know very much."

* * *

And neither does your editor. And he took longer to find it out. But he is happy.

Wilfred E. Wooldridge

Wilfred E. Wooldridge, M.D.

MSMA President Martin Addresses House of Delegates at Third Interim Session

The following is a transcript of the address delivered by John S. Martin, M.D., president, at the MSMA Third Interim Session in Cape Girardeau. Transactions of the Interim Session are reported on page 99.

Mr. Speaker, Dr. McAlhaney, Delegates and Guests:

I do have some good news for you. My term as your president is half over, so you only have six months to wait for better things. I do have one consolation — Jimmy has not done much better.

However, I am proud of your MSMA for what it's done for you, the members of the MSMA, and also for what it's done for your patients and the general public. We must remember that all the good that comes from this Association depends on the efforts of all its members.

For the past year or two, we have let some internal disagreements overshadow the great accomplishments which we have fostered. I hope you will get this so-called problem out of the way right now.

I do not care where you go or where you are from, be it Bogard, Cape Girardeau, Kansas City, St. Louis or Thayer. Whenever we get together, we as physicians seem to talk about the same things — medicine and the federal government — and these are our priority interests.

Together, we can win some of the battles, but segmented, we lose our clout.

At the request of this august body, your Planning Committee and the Council have considered many, many proposals to provide a more democratic representation for all MSMA members. You have them before you today. Let's pick one of the proposals, adopt it and get this Association back in the arena where it belongs — promoting the science and art of medicine, protecting the public health and bettering the medical profession. We do not need the Secretary of HEW, "What's-his-name," to tell us one damn thing.

We know we have enemies, but we also know they are not within the membership of this Association. We also know that a unified membership is required to fight our battles. Today, we have that opportunity to unify. Please, let's do it.

James Russell Lowell said, "Democracy means not 'I am equal to you,' but 'You are equal to me.' "

You know, when you get back from this meeting, some colleague will probably ask why the heck you bother to be involved with your State Association . . . or the AMA . . . or, for that matter, even your local medical society. It's the old question. We've all heard it. "What's the State Association done for me lately?"

Well, the MSMA has done a lot for its members and for the general public for many years and it has also done a lot *lately*.

Just a year ago, this House approved the formation of MOMEDICO, a stock professional liability insurance company which we believe will result in lower premiums for our members. You will receive a report later, but let me assure you that the Council and officers are pleased with the progress of MOMEDICO and we feel you will be, too.

MSMA dues, as you are aware, are used in many ways. And it seems that more and more funds are going for legal services for the protection of the membership and our patients. Just recently, the Association intervened in a malpractice suit in which punitive damages were awarded to the plaintiff. This precedent-setting case clouds the entire professional liability scene. We feel we must challenge this decision for our members with the Association's resources.

We also have engaged legal assistance in objecting to rules and regulations, issued by the Missouri Board of Chiropractic, which would greatly expand the practice of chiropractors in the state. You know for years now this Association has thwarted annual attempts by the chiropractors to pass legislation allowing them to practice in areas which require medical knowledge. Suddenly, we find that these people are trying to bypass the legislative process and write their own game rules. We cannot stand by and watch our past efforts be pushed aside without a fight, and we do intend to fight.

The chiropractic issue brings up two other areas of endeavor by your Association which, although they have exhibited success in the past, can stand improvement.

Our committee on Legislative Affairs expends vast amounts of time, energy and expertise to inform the General Assembly of medicine's views on all vital bills affecting your patients and your practice. I believe we and, in many instances, we alone have been able to maintain or affect one of the best medical climates according to statutes of any state in the union. It hasn't been easy, and it is becoming more difficult annually as these groups, which would expand their practices or favor very limited special interest legislation, continue to grow in numbers and involvement on the legislative scene.

We need the involvement of all MSMA members in informing their elected representatives how we feel about legislation. We'll never get full involvement, but if we can pick up one or two here and there, it will help. How about you? Are you interested enough in your practice and your patients to learn about pending legislation and then personally contact your representatives? If you are, stop by the Delegate Registration Desk and put your name on the line. Then, when you go back home, you can expect to receive pertinent information on legislation and you will be expected to deliver some of this information to your elected officials. Get your name on that list. You'll find that your legislators do want to hear from you on the issues.

Anyone who knows me knows I couldn't go to a Sunday School meeting without pushing PAC. Let's face it. Money talks to you, to me, to your church, to everyone, and that includes legislators. No, we can't buy votes with MMPAC or AMPAC funds, but the interest we show in a candidate's campaign does provide us with an opportunity to present our views to that candidate. That's how the system works. Yet, sad as it is, just one out of five of our Association members supports PAC.

In the years I have been involved with PAC, I have heard all of the excuses about why physicians won't contribute just $25 a year to probably the most important cause they could support. "You give to too many in one party — you give to too many in the other party — you helped a guy who voted against such-and-such a bill."

Well, let me tell you that your PAC Board is diligent with monies members contribute, and you will find that our track record has been very good.

The meeting dates of the PAC Board will be published in the Journal and all members are invited.

While we are on this subject, what are you going to do next Tuesday? Let's hope you're going to vote. Tuesday is Election Day and physicians in Missouri and around the country had better start showing up at the polls. That's where we have the final say. This coming Tuesday, take time to vote and remind your family to cast their ballots. Then when you get to the office, tell your girls to take off one by one and go to vote. One state representative primary race was decided by five votes last August. You and yours could make the difference.

Remember what Will Durant said, "The political machine triumphs because it is a united minority acting against a divided majority."

A couple of more areas of interest and importance to physicians should be touched upon here. We have recently formed a medical-nursing liaison committee to tackle such problems as are outlined in one of the resolutions in your handbook. This committee will meet again in January. We hope to expand the scope of either this committee or another committee to include discussions of mutual concerns with podiatrists, op-

Dr. Martin

tometrists, physical therapists and others.

Another vitally important concern is the new Committee on Impaired Physicians, formed by this House last spring. This Committee will need the support of all our members if it is to do the job intended. We aim to educate our entire membership on the reason for the Committee and the procedures necessary to make it work. I see this Committee as a "rescue squad for those few physicians who do need help, but are reluctant to admit it or seek it." In the end, this Committee can salvage some of our valued colleagues and serve to protect the public good.

One cannot speak to this body without telling you again how important the Auxiliary is to your Association. So we say again, thanks to the Auxiliary. But, as always, we need your help again. We are asking you to help us monitor the HSA meetings in your area. Oh, yes, there is one other thing. After this coming election, we will need your help in interviewing the legislators.

One other thing I want to tell you. As the years have gone by, my association with the staff of the MSMA has become closer and closer. No finer nor more dedicated people have I worked with. Cooperation with and service to the medical profession is always their goal.

As I understand, the only absolute rule that the executive secretary has imposed is that all the girls must wear a girdle. This, I understand, is to keep an unfortunate situation from spreading.

Other than that, our staff has the one element I like, and that's common sense. Common sense, to me, is the knack of seeing things as they are and doing things as they ought to be done.

It's evident, I believe, that your Association is doing a lot for its members and their patients. It's a shame, perhaps, that we don't blow our own horn more often and louder.

We have something here. We have fellowship, we have unity of purpose and we have mutual respect. I'm proud . . . no, I'm damn proud . . . of what our Association and profession stand for, but we must, must stand together. Thank you.

SERVING YOU IN MISSOURI

MUNNS
MEDICAL
SUPPLY

9202 Barton
Overland Park, Ks 66214
913-492-5820

635 Hanley Ind. Ct.
St. Louis, Mo. 63144
314-645-0300

Preliminary Program

MISSOURI STATE MEDICAL ASSOCIATION

121st Annual Session

Chase-Park Plaza Hotel, St. Louis **April 19-22, 1979**

Thursday, April 19

8:00 AM Registration of Delegates.
10:30 AM **House of Delegates Meeting,** Opening Session.
1:00 PM Reference Committee Meetings.
6:30 PM Missouri State Surgical Society Dinner and Board Meeting.
6:30 PM American Medical Women's Association Cocktails and Dinner.

Friday, April 20

8:00 AM Registration.
8:00 AM Missouri University Board of Directors Breakfast and Meeting.
9:00 AM General Session — *Cost Containment.*
Introductions: John N. Martin, M.D., St. Joseph, MSMA President.
Speaker: Hoyt D. Gardner, M.D., Louisville, Ky., President-Elect, American Medical Association.
10:30 AM Intermission to View Exhibits.
11:00 AM *Treatment of Back and Spine Injuries*
Allen P. Klippel, M.D., Omaha, Neb., Director of Emergency Department, Creighton University.
Sponsored by Emergency Room Physicians.
11:00 AM *Problems in Surgical Intensive Care Unit.*
Panel Participants:
  John Collins, M.D., Stanford, Calif., Professor and Chairman, Department of Surgery, Stanford University.
  Walt Bernards, M.D., Galveston, Tex., Professor of Anesthesiology, University of Texas.
  Joseph Ruwitch, M.D., St. Louis, Assistant Professor, Clinical Medicine and Cardiology, Washington University School of Medicine.
Moderator: George L. Tucker, M.D., St. Louis.
Sponsored by the Missouri State Surgical Society.
11:00 AM *The Detection of High Risk Post MI Patient.*
Charles Oliver, M.D., St. Louis.
Six Pitfalls in the Treatment of MI.
Carl White, M.D., Iowa City, Iowa, Professor of Medicine, University of Iowa Medical School.
Moderators:
  James C. Clouse, D.O., Clinton.
  David D. Thomasson, M.D., Springfield.
Sponsored by the American Heart Association, Missouri Affiliate.
11:00 AM *Annual Charles A. Brasher, M.D. Medical Lectureship.*
Sponsored by the Missouri Chapter, American Thoracic Society and the American Lung Associations of Eastern and Western Missouri.
11:00 AM *The Use and Abuse of Minor Tranquilizers.*
Gerald Klerman, M.D., Rockville, Md., Director of Alcohol and Drug Abuse.
Sponsored by the Missouri Psychiatric Association.
11:00 AM *Teenage Skin Problems.*
John Strauss, M.D., Iowa City, Ia., Professor and Chairman, Department of Dermatology, University of Iowa.
Sponsored by the Missouri Dermatological Society.
11:00 AM Program Sponsored by the Missouri Orthopaedic Association.
12:30 PM Missouri University Alumni Luncheon.
Missouri Thoracic Society Luncheon.
1:00 PM *Emergency Room Physicians Program (Continued).*
Status of Emergency Medicine Boards.
Sponsored by Emergency Room Physicians.

1:30 PM *How to Evaluate Hirsutism.*
John Strauss, M.D., Iowa City, Ia.
Treatment of Common Dermatoses.
(Panel of Missouri Dermatologists).
Moderator: L. E. Millikan, M.D., Columbia.
Sponsored by the Missouri Dermatological Society.

2:00 PM New Concepts of Breast Cancer: The Role of Conservative Surgery?
Panel Participants:
Bernard Fisher, M.D., Pittsburgh, Pa., Professor and Chairman of Surgery, University of Pittsburgh.
Carlos A. Perez, M.D., St. Louis, Director of Radiation Oncology, Washington University School of Medicine.
Walter C. Bauer, M.D., St. Louis, Surgical Pathologists-In-Chief Barnes and Associated Hospital.
William L. Donegan, M.D., Milwaukee, Wis., Professor of Surgery, Marquette School of Medicine, University of Wisconsin.
Moderator: Falls B. Hershey, M.D.
Sponsored by the Missouri State Surgical Society.

2:00 PM *Everything You Wanted to Know About Blood Platelets, But Were Afraid to Ask.*
Speakers:
W. A. L. Heaton, M.D., St. Louis, Assistant Professor of Pathology, Associate Director of Blood Bank, Barnes Hospital, Washington University School of Medicine.
J. Heinrich Joist, M.D., St. Louis, Associate Professor of Medicine and Pathology, Co-Director, Division of Hematology-Oncology, St. Louis University.
Sponsored by the Missouri Society of Pathologists.

2:00 PM *Acid-Base for the Clinician.*
Walter C. Bernards, M.D., Galveston, Tex., Professor of Anesthesiology, University of Texas.
Sponsored by the Missouri Society of Anesthesiologists.

2:00 PM Program Sponsored by the Missouri Orthopaedic Association.

2:00 PM "Influenza 1979' — Bruce Hamory, M.D., Columbia, Assistant Professor of Infectious Diseases, Department of Medicine, University of Missouri.
"Unstable Angina" — Martin Alpert, M.D., Columbia, Instructor, Division of Cardiology, Department of Medicine, University of Missouri.
"Current Concepts in Breast Cancer" — Carl Kardinal, M.D., Columbia, Associate Professor of Medicine and Director of the Department of Medicine, Ellis Fischel State Cancer Hospital.
Moderator: Michael C. Perry, M.D., F.A.C.P., Columbia.
Sponsored by the Missouri Society of Internal Medicine.

2:30 PM *Toxicology in the Emergency Department.*
Howard Schwartz, M.D.
Sponsored by Emergency Room Physicians.

3:30 PM Intermission to View Exhibits.

3:30 PM Missouri State Medical Foundation Board Meeting.

4:00 PM **House of Delegates**, Second Session.

4:00 PM Missouri State Allergy Association Business Meeting.

6:00 PM Reference Committee Meetings.

6:30 PM Cocktails and Dinner:
Missouri Dermatological Society.
Missouri Society of Pathologists.
Physical Medicine and Rehabilitation.
Missouri Psychiatric Association — "Some Thoughts on Psychotherapy" — Fernando Tapia, M.D., Oklahoma City, Okla., Assistant Chairman, Department of Psychiatry, University of Oklahoma.
Missouri State Surgical Society.
Speaker: Gilbert Campbell, M.D., Professor and Chairman of Surgery, University of Arkansas School of Medicine.

Saturday, April 21

7:30 AM MSMA Auxiliary Public Affairs Breakfast.

8:00 AM Registration.

8:00 AM Missouri Dermatological Society Course on *Modern Dermatological Therapeutics* in conjunction with the American Academy of Dermatology.

9:00 AM *Discuss the Issues with Your AMA Delegates.* (Missouri's AMA Delegates and Alternates will be available for an open forum-type discussion.)

9:00 AM *New Concepts in Venom Immunity – Clinical Application.*

Speakers: "Stinging Insects" — Martin D. Valentine, M.D., Baltimore, Md., Associate Professor of Medicine, Division of Clinical Immunology, Johns Hopkins.

"Snakes" — H. James Wedner, M.D., St. Louis, Assistant Professor of Medicine, Washington University, Division of Allergy and Immunology.

"Missouri Brown Spider" — Philip C. Anderson, M.D., Columbia, Professor of Medicine, University of Missouri.

Presiding: J. Allen Thiel, M.D., St. Louis.

Moderator: Larry E. Millikan, M.D., Columbia.

Sponsored by the Missouri State Allergy Association and the Missouri Chapter, American College of Pediatrics.

9:00 AM Program Sponsored by the American Cancer Society, Missouri Division, Inc.

9:00 AM *Selected Topics — Neuro-Ophthalmology.*

H. Stanley Thompson, M.D., Iowa City, Iowa, Professor of Ophthalmology, University of Iowa.

Moderator: Robert Tobin, M.D., St. Joseph.

Sponsored by the Missouri Ophthalmology Society, Inc.

9:00 AM Program Sponsored by the Missouri OB-GYN Society.

9:00 AM *Pediatric Rehabilitation*

Speaker: Margaret A. Turk, M.D., Columbus, Ohio.

Physical Rehabilitation and the Worker's Compensation Law.

Speaker: Mr. John Dixon, St. Louis.

Sponsored by Physical Medicine and Rehabilitation.

9:00 AM *State Emergency Medical Services.*

Samuel Bonney, M.D., St. Louis.

Sponsored by the Emergency Room Physicians.

9:00 AM *Diagnosis and Treatment of Sinus Disease and Surgery of the Paranasal Sinuses.*

Speaker: Frank N. Ritter, M.D., Ann Arbor, Mich., University of Michigan.

Sponsored by the Missouri Ear, Nose and Throat Association.

10:00 AM *Hyperthermia.*

(Speaker to be announced).

Sponsored by the Emergency Room Physicians.

10:00 AM Missouri Radiological Society Board of Directors Meeting.

10:30 AM Intermission to View Exhibits.

11:00 AM Continuation of Missouri Ophthalmological Society, Inc. Program.

11:00 AM *Management of the Geriatric Amputees.*

Speaker: K. Ken Hu, M.D., St. Louis.

Live Demonstration of Application of Temporary Lower Extremity Prosthesis.

Speakers: K. Ken Hu, M.D. and his Associates, St. Louis.

Sponsored by Physical Medicine and Rehabilitation.

11:00 AM *Surgical Malpractice in Missouri* — Panel Discussion.

Panel Participants:

Mr. Ronald R. Kennedy, Jefferson City, Executive Secretary, Professional Liability Review Board.

Mr. James E. Hullverson, Mr. Robert G. Burridge, St. Louis, Attorneys at Law.

Moderator: Robert L. Glass, M.D., Sedalia.

Sponsored by the Missouri State Surgical Society.

11:00 AM *Drug Abuse Update.*

Speaker: Ronald Dougherty, M.D., Syracuse, N. Y., Director, Drug Abuse — Chronic Pain Treatment and Rehabilitation Center, Crouse-Irving Memorial Hospital.

Sponsored by the Missouri Academy of Family Physicians.

11:00 AM Program Sponsored by the Missouri OB-GYN Society.

11:00 AM *Treatment of Hypertension in the Emergency Department.*

Dr. Elenbass, Kansas City.

Sponsored by the Emergency Room Physicians.

11:00 AM Program Sponsored by the Missouri Orthopaedic Association.

12:00 Missouri State Allergy Association Luncheon.

Radiology Board of Directors Luncheon.

Missouri Ophthalmological Society, Inc. Luncheon.

Physical Medicine and Rehabilitation Luncheon.

12:30 PM 50-Year Club Luncheon.

Missouri OB-GYN Society Luncheon.

Missouri Society of Neurosurgeons Luncheon.

1:00 PM *Panel Discussion on Trauma.*

Sponsored by the Emergency Room Physicians.

1:30 PM Missouri Medical Political Action Committee Meeting.
1:30 PM *Chronic Pain Treatment.*
Speaker: Ronald Dougherty, M.D., Syracuse, N.Y., Director, Drug Abuse, Chronic Pain Treatment and Rehabilitation Center, Crouse-Irving Memorial Hospital.
Sponsored by the Missouri Academy of Family Physicians.
1:30 PM Program Sponsored by the Missouri Radiological Society.
2:00 PM Presentation of Papers from Junior Fellows.
Sponsored by the Missouri OB-GYN Society.
2:00 PM Continuation of Program by Missouri Ophthalmological Society, Inc.
2:00 PM Program Sponsored by the Missouri Society of Neurosurgeons.
2:00 PM *Diagnosis and Treatment of Urologic Problems for Family Practitioners.*
Speakers: Faculty of the Division of Urology, Washington University, St. Louis, William R. Fair, M.D., Chairman.
Sponsored by the Federation of Missouri Urologists.
4:00 PM Missouri State Allergy Association Business Meeting.
5:00 PM Missouri University Medical Alumni Reception.
St. Louis University Medical Alumni Reception.
Washington University Medical Alumni Reception.
6:30 PM Social Hour for those attending Annual Banquet.
7:15 PM Annual Banquet.

Sunday, April 22

7:30 AM House of Delegates Breakfast and Final Session.
9:00 AM Missouri Dermatological Society meeting at Wohl Clinic.

A New Event at the Annual Session!

You Are Invited to Attend and Enjoy

THE FIRST ANNUAL

AMA-ERF-MSMF BENEFIT AUCTION

Thursday, April 19 **Chase-Park Plaza Hotel**

Here's your opportunity to contribute to the AMA-ERF and MSMF (MSMA student loan fund) and enjoy doing it. The Auxiliary asks that you donate worthwhile items such as antiques, paintings, photographic art, arts and craft items and other items you consider appropriate. Please watch for further details in the March issue of Missouri Medicine.

Plan Now to Donate and Participate!

★ *A PERMANENT SOLUTION TO MALPRACTICE PROBLEMS FOR MISSOURI DOCTORS* ★

MEDICAL DEFENSE ASSOCIATES, LTD.

1150 ~~1100~~ **MISSOURI PHYSICIANS CAN'T BE WRONG!**

That's right! Medical Defense Associates Ltd. of Springfield, Missouri is insuring 1150 ~~1100~~ Missouri doctors. Missouri doctors are moving to MDA at a rate of one per day. Because they obtain . . . .

- Malpractice insurance from a non-profit mutual assessment company, established and operated BY and FOR Missouri physicians
- Occurrence (rather than Claims-Made) Coverage
- Coverage for Punitive Damages
- Aggressive Defense of Unfounded Claims
- Highly competitive rates
- No Arbitrary Cancellation of Policies.
- No Additional Investment

MDA reserves now exceed 6.4 ~~$6~~ MILLION. Our books are open to inspection. If you're still not convinced . . . talk to one of your colleagues who has signed with MDA. Our policy holders are our best salesmen!

Kansas City (St. Louis Premiums for Physicians and Surgeons

			200/600		*$1 Mil. Excess*	
			First yr.	*Renewal*	*First yr.*	*Renewal*
Class	I	No Surgery	594	374	464	288
	II	Minor Surgery	983	563	768	432
	IIID	Urologist, Opthalmology, Proctologist	3,744	2.304	2.880	1,728
	IVB	General Surgeon	4,880	3,080	3,840	2,400
	IVA	Otolaryngologists, OBGYN, Plastic	6,243	3,795	4,896	2.938
	IVG	Thoracic, Neuro, Orthopedists	7,956	4,836	6,240	3,744
	IVH	Anesthesiologists	8,434	5,074	6,624	3,936

Outstate Premiums for Physicians and Surgeons

			200/600		*$1 Mil. Excess*	
			First yr.	*Renewal*	*First yr.*	*Renewal*
Class	I	No Surgery	540	340	400	240
	II	Minor Surgery	819	469	640	360
	IIIC	Urologist, Opthalmology, Proctologist	3,120	1,920	2,400	1,440
	IVC	General Surgery	4,067	2,567	3,200	2,000
	IVD	Otolaryngologist, OBGYN, Plastic	5,202	3,162	4,080	2,448
	IVE	Thoracic, Neuro, Orthopedists	6,630	4,030	5,200	3,120
	IVF	Anesthesiologists	7,028	4,228	5,520	3,280

The premium assessments are subject to adjustment based on actual claims experience. Additional classifications and rates for limits of 100/300, 200/400, and 500/1 Mil are available.

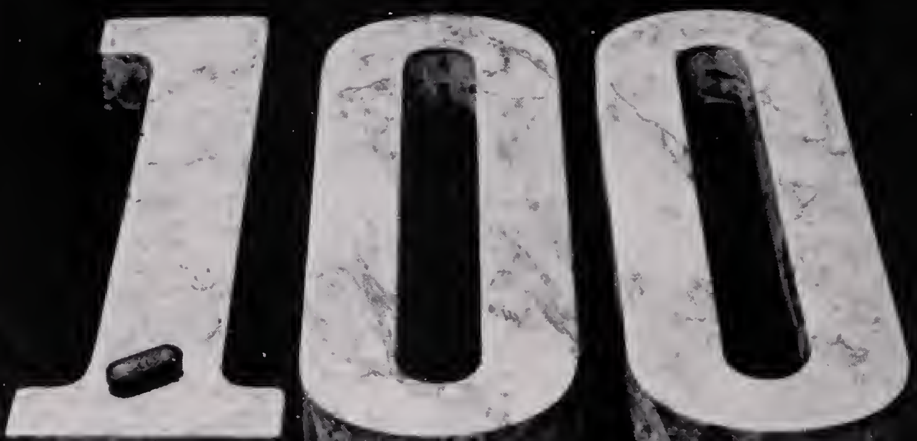
For additional information please call or write:

MISSOURI MALPRACTICE MANAGERS, 1031 E. Battlefield — Suite 117B, Springfield, MO 65807
Phone 1-800-492-7212 or (417) 883-0199

contains no aspirin

tablets
Darvocet-N® 100 ⓘⓥ

100 mg. Darvon-N® (propoxyphene napsylate)
650 mg. acetaminophen



Lilly

700565

Additional information available to the profession on request from
Eli Lilly and Company
Indianapolis, Indiana 46206

Eli Lilly and Company, Inc.
Carolina, Puerto Rico 00630

Volume 76, Number 2—February, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1979 BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

ROBERT L. COZAD, Ph.D., JERRY TEMPLER, M.D.
and WILLIAM E. DAVIS, M.D., *Columbia*

On Hearing Aid Recommendation

THE DETRIMENTAL EFFECTS of sensorineural hearing loss upon the life of an elderly person are difficult to exaggerate. Adequate functioning in our society depends upon communicating, which in turn depends heavily upon hearing. The term "senile" is used by many persons to describe the elderly person who responds inappropriately to external stimuli. Sensory deprivation may be a major factor contributing to senility. By far, the most important factor of sensory deprivation is that of hearing loss.

The patient with a hearing deficit needs extensive rehabilitation. Continued auditory stimulation is a major part of that rehabilitation, and the hearing aid often is helpful in providing this needed auditory stimulation. However, many types of hearing loss may be resolved by treating of the causes. Thus, sensory deprivation may be resolved medically or surgically without the need for a hearing aid.

The rationale is that the potential hearing aid user should have an opportunity to seek resolution of his hearing loss medically or surgically to prevent further progression of the hearing loss or related physical complications. On this basis, the Federal Food and Drug Administration (FDA), in August 1977, issued regulations requiring hearing aid dispensers to advise people who wish to purchase hearing aids that they should have a medical evaluation of their hearing problem before purchasing an aid.

Because many primary care physicians will be consulted for this purpose, we offer a brief review of these new FDA regulations and emphasize areas that will assist all physicians in evaluating the hearing problems of these patients.

First, the physician should recognize that the requirement of a medical evaluation apply to those patients who previously have worn an aid as well as those who are seeking an aid for the first time. Likewise, the medical evaluation must be done within six months before the purchase of the aid.

Provisions are made in these regulations for those individuals who do not wish to have a medical evaluation because of religious or personal beliefs. These individuals may sign a waiver so stating. If the waiver is chosen, however, the

A hearing loss, which decreases a person's ability to communicate and function in society, is common in all age groups. However, almost one fifth of the elderly have significant hearing impairment. Most of these patients can be helped with a hearing aid. In 1977, the FDA issued regulations advising medical evaluation and treatment before a hearing aid purchase. The patient's hearing must be thoroughly evaluated initially and while wearing the aid to assess its effectiveness.

Dr. Cozad, Dr. Temple and Dr. Davis are Associate Professors of Surgery, Division of Otolaryngology, the University of Missouri Medical Center.

hearing aid dispenser must advise the individual that his best interests would be served by obtaining a medical examination before buying an aid. The dispenser is specifically prohibited from actively encouraging the prospective customer to exercise the waiver option.

Patients under the age of 18 years cannot be waived and must have a medical examination. Also, it is recommended that the hearing evaluation for children be performed by an audiologist. Hearing loss in children will retard or arrest speech and language development, so it is imperative that they have a complete hearing evaluation.

The physician should give the patient a written statement noting that the patient's hearing has been medically evaluated (Fig. 1). If his physician believes that medical or surgical therapy is not indicated, the patient may take the written statement to the hearing aid dispenser and purchase an aid. The dealer is required to keep the medical statement on file for three years after the purchase of the aid.

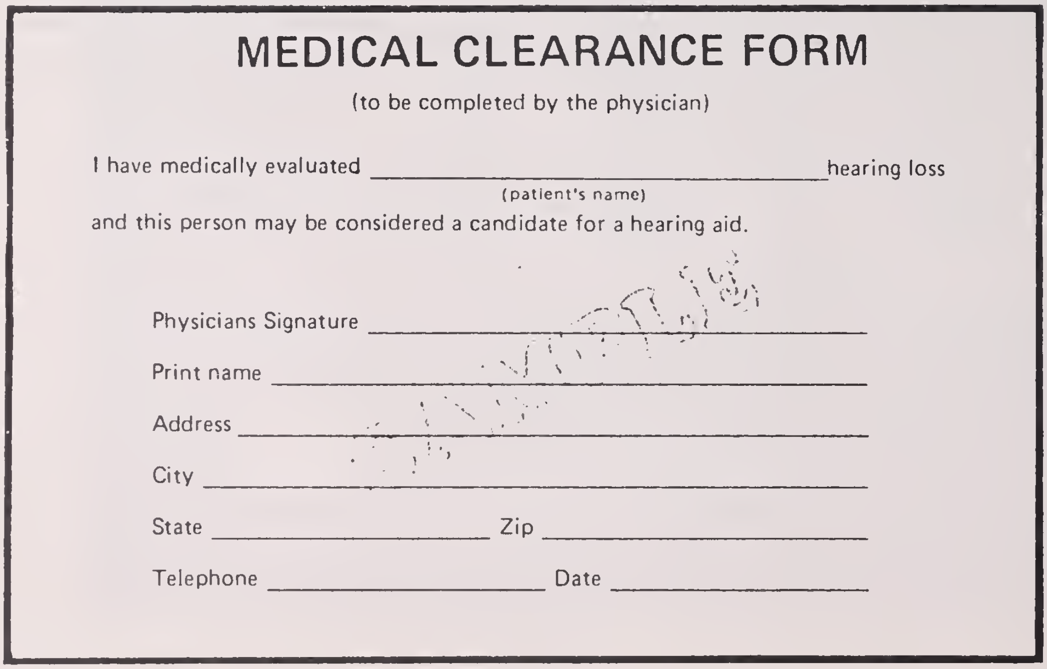
Patients seeking advice regarding hearing aid use include people of all ages, but the vast majority are elderly. In patients aged 65 years and older, the incidence of hearing loss is estimated to be 20%. With a continued increase of this age group, hearing loss has become a major health problem. Hearing loss in the older group may be the result of several causes. Hearing loss secondary to aging (presbycusis) is the most common cause of hearing loss acquired in adulthood. Chronic exposure to loud noises is probably the next most common cause. Efforts are being made by industry to prevent this type of hearing loss. Patients with hearing loss who continue to be exposed to noise must be protected to prevent further progression of the loss. Ototoxic drugs cause hearing loss in a significant number of patients. Prevention is the only satisfactory treatment.

Treatable sensorineural hearing losses are uncommon. Syphilis is increasing as a cause of hearing loss. Early vigorous treatment may reverse the hearing loss. Hearing loss seen in patients with hypothyroidism and Meniere's disease may be helped by treatment.

Patients with unilateral hearing loss rarely want hearing aids since they generally hear quite well with one good ear. Because they do have problems when someone talks to their "deaf side," some will want an aid. A unilateral loss is suggestive of a localized pathologic condition and the ear should be carefully examined. The most common losses resulting from aging and noise exposure are generally symmetrical.

HISTORY

It is necessary to obtain an accurate history to determine if the patient needs a hearing aid. The patient may have an inaccurate opinion of his hearing ability. However, his spouse, family members and colleagues will have a better idea.



MEDICAL CLEARANCE FORM

(to be completed by the physician)

I have medically evaluated ____________________ hearing loss
(patient's name)
and this person may be considered a candidate for a hearing aid.

Physicians Signature ____________________

Print name ____________________

Address ____________________

City ____________________

State __________ Zip __________

Telephone __________ Date __________

Fig. 1 Sample of form used to inform the hearing aid dispenser that the patient should have a hearing aid.

TABLE 1

Factors Suggesting That a Patient Is a Good Candidate for Hearing Aid Use

1. Is highly motivated to improve hearing
2. Gregarious, enjoys going to church, plays, etc.
3. Understands speech well when volume is sufficient
4. Not markedly intolerant to loud noises
5. Not easily distracted by background noises
6. Is realistic about his hearing problem and knows what he can expect from a hearing aid

Factors Suggesting a Relatively Poor Candidate for a Hearing Aid

1. Does not want an aid, but is being pushed by his family
2. Rarely attends social events or activities
3. Very poor speech discrimination
4. Unable to care for hearing aid
5. Narrow range from threshold of hearing to sounds being uncomfortably loud
6. Unrealistic about hearing loss — thinks that the aid will make his hearing completely normal

They know how loudly they have to talk for the patient to hear and how well he understands speech. Occasionally, the patient will voluntarily say that he can hear a voice but cannot understand what is being said. Speech discrimination or the ability to correctly identify the spoken words is not the same as being aware that someone is talking. Patients frequently state that loud sounds are almost painful to the ear. This condition (recruitment) means that the range of sound intensity between just being able to hear and uncomfortable loudness is small. The patient frequently complains that he can converse well with one person in a quiet room but has serious difficulty hearing in noisy places and when several persons are talking. His ears have lost the ability to selectively repress certain sounds while listening to others.

Factors that suggest a good candidate for hearing aid use and others that suggest a relatively poor candidate are listed in Table 1.

Physical Examination

The external ear canal should be examined for obstruction by cerumen, foreign bodies or even benign tumors. It is uncommon for occlusion to cause serious hearing loss, but it may cause problems when superimposed upon a moderate sensorineural loss. The tympanic membrane should be translucent and should move easily when alternating positive and negative pressures are applied during pneumatic otoscopy. The physician may observe a slight movement of the tympanic membrane which is produced by occluding both nostrils and swallowing or trying to blow through the occluded nostrils. In both instances, air forced into the eustachian tubes pushes against the tympanic membrane. Fluid in one ear of an adult patient with no history of chronic ear disease suggests a tumor in the nasopharynx that must be ruled out.

Hearing loss secondary to chronic infection involves perforation of the tympanic membrane or erosion of one of the ossicles. These conditions generally can be corrected surgically.

Hearing loss caused by occlusion of the external canal or by conditions impeding vibration of the tympanic membrane and ossicles is conductive hearing loss (Fig. 2). Conductive hearing loss may be demonstrated by testing with the 512 and 1024 cycle tuning forks. The handle of the vibrating tuning fork is held firmly in contact with the skull in the midline (Weber Test). The sound is heard best in an ear with conductive hearing loss.

The Rinne test compares the intensity of the perceived sounds from a tuning fork first held in contact with the skull and then in the air near the external canal. When the handle of the fork is held in contact with the skull, the sound is transmitted through the bone directly to the fluids of the cochlea, bypassing the ear canal and middle ear. The tuning fork vibrating in air is heard as the result of stimulating the entire auditory system. If the tuning fork sounds louder when held in the

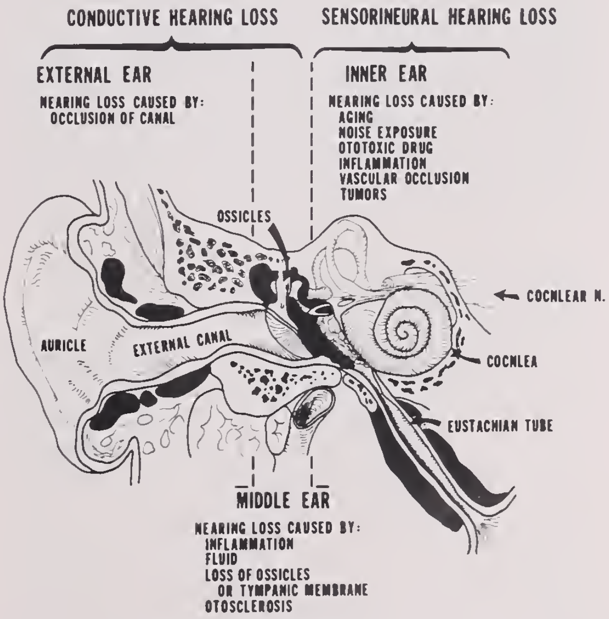


Fig. 2 Diagrammatic section of the ear indicating the site of common hearing disorders.

air, the hearing loss is due to disease of the cochlea or cochlear nerve. The vast majority of patients will be in this category and may be helped only by amplification and rehabilitation.

AUDIOMETRY

Hearing testing should be done not only to determine the degree and type of hearing loss but also to determine the impact of the hearing aid on its potential user.

An extensive array of auditory tests are available for determining not only the degree of hearing loss but also the specific area of the auditory system (middle ear, cochlea, 8th nerve and others), which is responsible for the hearing loss. Thus, if a medically or surgically treatable problem is identified from these auditory tests, the appropriate therapy can be initiated. The improvement of the hearing function by medical treatment can likewise be monitored and quantified.

When medical or surgical resolution of the hearing problem is not possible, hearing tests should be performed to determine the potential usefulness of the hearing aid to the patient. In general, these tests can demonstrate (1) how much improvement (amplification) in hearing is provided by the aid; (2) how much speech understanding is improved by hearing aid use; (3) whether loud sounds will be a problem to the person who uses the aid; (4) how environmental noise may influence the patient's hearing aid use; and (5) how much lipreading is improved by use of the aid. This latter test is particularly important for some hearing impaired patients who may not show a great improvement in one or more of the aspects of a hearing aid previously noted. It may demonstrate that the hearing aid makes a substantial improvement in their lipreading ability. This fact alone may make the hearing aid worthwhile for the hearing impaired patient.

In brief, an objective evaluation of the hearing aid's performance for the patient can and should be made in order to quantify the potential usefulness of the aid. It also will help to identify any problems that the user may have with the aid.

REHABILITATION

The hearing aid is an indispensable part of rehabilitation, but only a part. The hearing-impaired patient must become knowledgeable about his hearing loss. He must know how much hearing he can regain by simple amplification and how much must be compensated by vision. He should have a basic knowledge of the mechanisms of the hearing aid and be proficient in caring for it. He should be aware of problems in the external canal caused by the mold.

Training in lip reading and hearing aid use often results in a greater improvement in communication than would be expected by adding the gains from both modalities. The brain processes bits of information from each modality and can interpolate missed bits of information.

CONCLUSION

The hearing aid is only one factor in improving communication in the hearing-impaired patient. Under ideal conditions, all facets of the patient's hearing are explored and a hearing aid is tailored to his needs. Careful selection of the type of aid and mold are extremely important. Repetitive explanations for the wearing, adjustment and maintenance of the aid are necessary. Before purchasing the aid, training in lipreading also may be necessary. A month's trial on a rental basis is highly desirable so that the patient can evaluate the aid in his own environment.

A 17-minute AMA film about the Physician Current Procedural Terminology is available for viewing before physician groups and audiences interested or involved in the communication of medical procedures and services. The CPT-4 film is available on loan at no charge from the Department of Computer Systems in Medicine, AMA Headquarters, 535 N. Dearborn St., Chicago, Ill. 60610

CHARLES L. PUCKETT, M.D., BYRON MAJOR, M.D.
and RICHARD WERNER, M.D., *Columbia*

Remember the Allen Test

THE PRESENT USE OF indwelling arterial catheters has enabled a high degree of sophistication in patient monitoring that has resulted in a better level of intensive patient care. However, the injudicious and inattentive use of indwelling intra-arterial catheters may result in significant ischemic complications. The occasional patient with inadequate collateral circulation between the radial and ulnar artery distributions or with occlusion of either artery may suffer irreparable damage if using the indwelling catheter causes thrombosis of the vessel used. It is suspected that a high incidence of thrombosis occurs normally but, because of an intact collateral circulation, is of no clinical consequence. The following case report illustrates the gravity of using an indwelling intra-arterial catheter in a patient with inadequate collateral circulation between the radial and ulnar arteries.

CASE REPORT

A 65-year-old white woman with a long history of nonspecific arthritis had been taking salicylates for several years, with weekly doses as high as 200 tablets. She was admitted to the University of Missouri Medical Center for salicylate overdose on March 12, 1977. During the next two days, she experienced respiratory deterioration and the disorder was diagnosed as progressive adult respiratory distress syndrome. On March 14, 1977, she was transferred to the respiratory intensive care unit for constant ventilation with 100% forced inspiratory oxygen (FIO_2). Hypotension and further deterioration necessitated a full resuscitation including placement of a Swan Gantz catheter and intravenous dopamine. A left radial artery catheter was inserted on March 15, 1977, at 2 PM. No Allen Test was performed. The patient remained in critical condition for the next three days. On March 16, 1977 at 11 PM (33 hours after placement of the catheter), the left thumb was cyanotic without capillary refill and the arterial line was discontinued. Subsequently, the patient improved steadily from a metabolic standpoint. The thumb, however, became progressively gangrenous.

The Plastic Surgery Service was consulted on March 28, 1977, for evaluation of the thumb. At this time, the entire thumb and thenar eminence and a portion of the radial aspect of the wrist were gangrenous and had undergone mummification (Figs. 1A and 1B). On April 13, 1977, the thumb and the necrotic portion of the wrist were amputated. Ischemic necrosis of the second metacarpal, which was not observed at this operative procedure, then became apparent. Because of the failure of this second metacarpal to heal, the patient was returned to the operating room on May 19, 1977 for debridement and coverage with a chest flap.

During this time, her cardiopulmonary condition had continued to improve. She had a release and set-in of the chest flap on June 15, 1977 (Fig. 1C). Her subsequent difficulties with this hand have included an episode of post-traumatic-sympathetic dystrophy which responded to trifluoperazine (Stelazine) and stellate-ganglion blocks. This condition improved to a satisfactory degree. She has surprisingly little instability of the index finger. Depending upon her future medical condition and her personal motivation, she may be a candidate for pollicization of the index finger.

DISCUSSION

Allen described his test in 1929. His method of evaluation of the radial and ulnar artery circulation was as follows:

"The hands of the patient are held in front of him. . . . If obstruction of the ulnar artery is suspected, the radial arteries are located by their pulsations; the examiner places one thumb lightly over each radial, with the forefingers of each hand

---

A patient with inadequate collateral circulation between the radial and ulnar arteries may suffer significant ischemic complications if an indwelling arterial catheter is used in his treatment. The authors recommend performing the effective Allen Test whenever placement of the catheter is considered.

Dr. Puckett is an Associate Professor and Head of the Division of Plastic Surgery, and Dr. Major and Dr. Werner are resident physicians in Plastic Surgery, Department of Surgery, Division of Plastic Surgery, University of Missouri Medical Center.

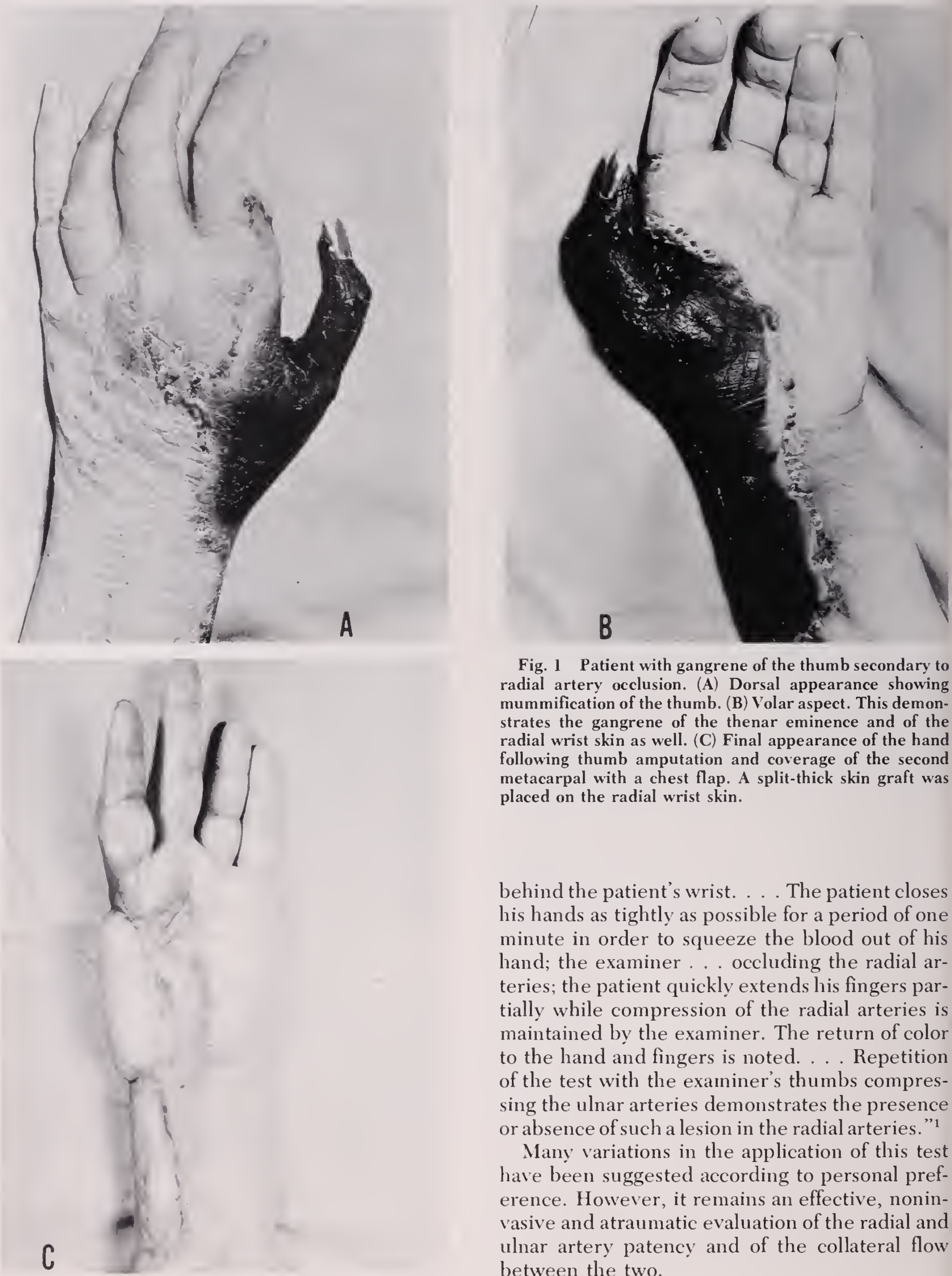


Fig. 1 Patient with gangrene of the thumb secondary to radial artery occlusion. (A) Dorsal appearance showing mummification of the thumb. (B) Volar aspect. This demonstrates the gangrene of the thenar eminence and of the radial wrist skin as well. (C) Final appearance of the hand following thumb amputation and coverage of the second metacarpal with a chest flap. A split-thick skin graft was placed on the radial wrist skin.

behind the patient's wrist. . . . The patient closes his hands as tightly as possible for a period of one minute in order to squeeze the blood out of his hand; the examiner . . . occluding the radial arteries; the patient quickly extends his fingers partially while compression of the radial arteries is maintained by the examiner. The return of color to the hand and fingers is noted. . . . Repetition of the test with the examiner's thumbs compressing the ulnar arteries demonstrates the presence or absence of such a lesion in the radial arteries."[1]

Many variations in the application of this test have been suggested according to personal preference. However, it remains an effective, noninvasive and atraumatic evaluation of the radial and ulnar artery patency and of the collateral flow between the two.

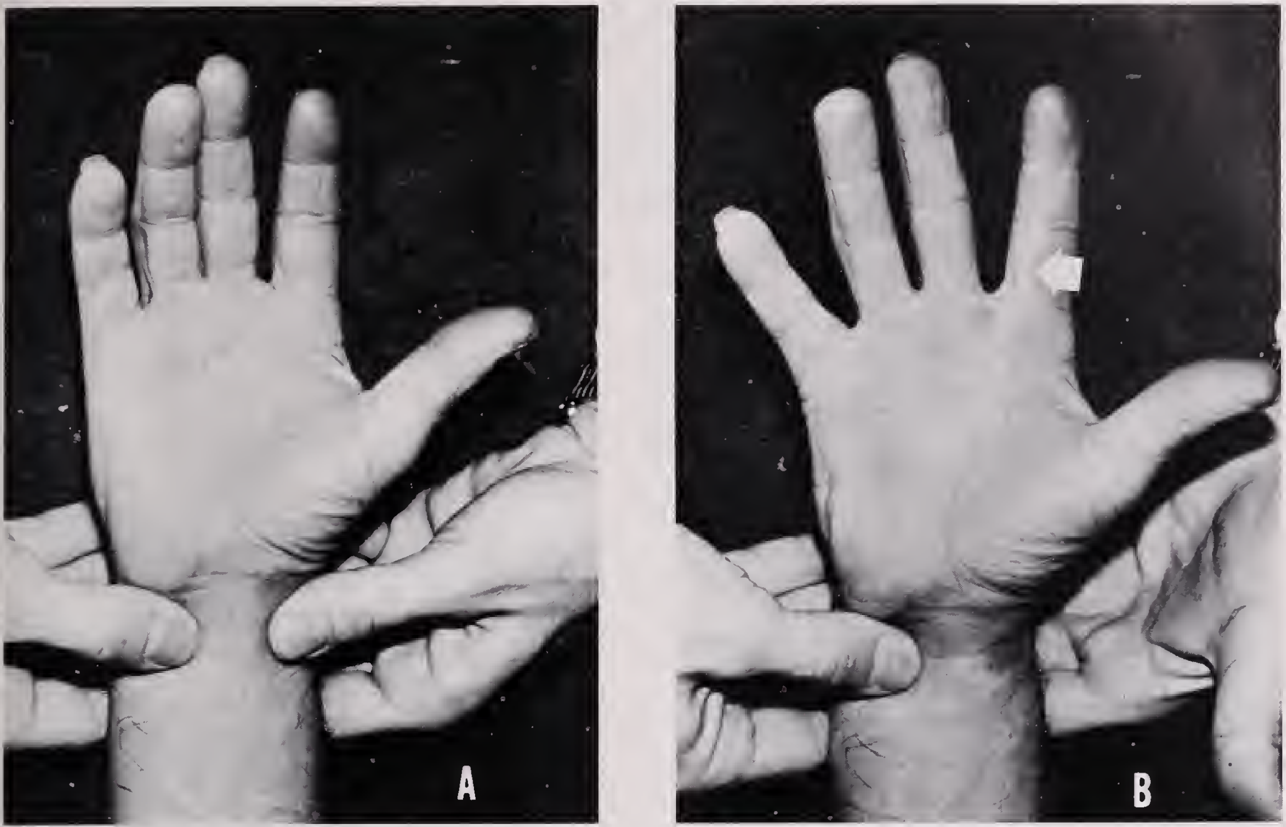
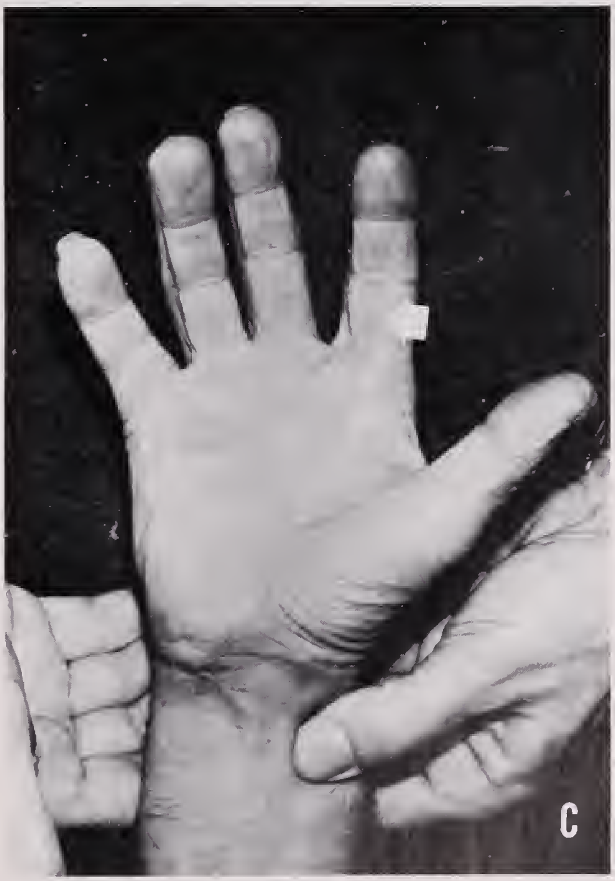


Fig. 2 Patient demonstrating an Allen Test with inadequate radial and ulnar artery collateral flow. (A) Prior to arterial occlusion and exsanguination there is a normal color and uniform vascular pattern to the palm and digits. (B) After exsanguination and compression of radial and ulnar arteries the radial artery is released. Note the pallor of the ulnar digits and the distinct line of flow demarcation bisecting the index finger *(arrow)*. The thumb had normal flush. (C) The test repeated releasing the ulnar artery. Note the flush of the ulnar part of the hand with clear demarcation splitting the index finger *(arrow)*. Note the pallor of the radial half of the index finger and the thumb.



Inadequate collateral circulation between the radial and ulnar arteries in a different patient is illustrated in Fig. 2. Despite the evidence of rapid flow into the radial and ulnar artery distributions (one to two seconds), there was essentially no evidence of crossover flow. At 18 seconds, the vascular pattern still demonstrated minimal collateral flow at the distal distribution of the two arteries (Figs. 2B and 2C). One can easily envision the ischemic difficulties that such a patient (with inadequate collateral flow distally) might develop after the thrombotic occlusion of either the ulnar or radial artery.

(Continued on page 88)

WILLIAM J. OTT, M.D. *and* HUBERT A. RITTER, M.D., *St. Louis*

Operative Obstetrical Intervention as an Element in Lowering Perinatal Mortality

INTRAPARTUM FETAL MONITORING and a more active approach to the management of high risk obstetrical situations may increase the incidence of cesarean sections. In an effort to analyze these trends and to report our experience with cesarean sections and other operative obstetrical procedures, we made a retrospective study at St. Mary's Health Center (SMHC) from Jan. 1, 1938 through Dec. 31, 1976.

TABLE 1
DEFINITIONS

Delivery: The passage of products of conception (excluding molar pregnancy or choriocarcinoma) after the 20th week of gestation (500 gm). Multiple pregnancy is considered as one delivery.

Stillborn Mortality Rate: number of stillborn infants delivered per 1,000 total births.

Neonatal Mortality Rate: number of neonatal deaths through the first 28 days of life per 1,000 live births.

Perinatal Mortality Rate: the sum of the neonatal and stillborn mortality rates.

Operative Obstetrical Delivery: any nonspontaneous delivery (excluding routine assisted deliveries).

1. Forceps Delivery
    - a. outlet forceps (low forceps)
    - b. mid forceps
    - c. difficult vaginal procedures include: high forceps, podalic version-extractions and breech extractions.

(Definitions for the various forceps deliveries are those listed by Laufe.)[1]

2. Cesarean section: delivery via the abdominal route.

MATERIAL AND METHODS

Obstetrical data for the period studied were collected from the obstetrical logs, departmental records and charts of patients at SMHC during the study interval. Complete data for each year were not always available. Table 1 lists the definitions used in the study.

RESULTS

Fig. 1 illustrates the total number of deliveries and the perinatal mortality from 1938 through 1976 at SMHC. During the time interval studied, there was a total of 112,485 deliveries at SMHC. Fig. 2 illustrates the incidence of total cesarean sections (primary plus repeat) during the interval. The rate of increase remained very low (less than 1% per five-year interval) until 1965. Since then, the rate has increased at one half of 1% per year. Detailed data for primary cesarean section rates were not available until 1956.

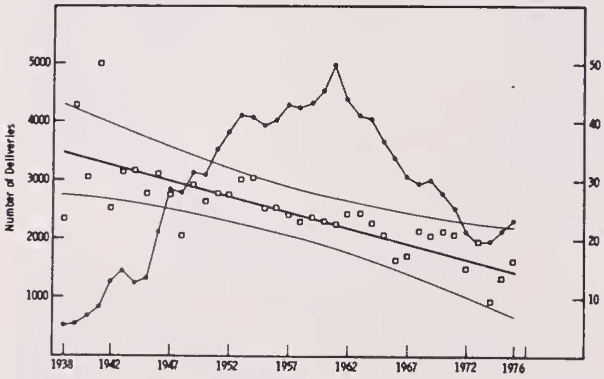


Fig. 1 Total number of deliveries (•) and perinatal mortality (□) from 1958 through 1976. Linear regression line and 95%. Confidence limits as calculated on the mean are illustrated for perinatal mortality.

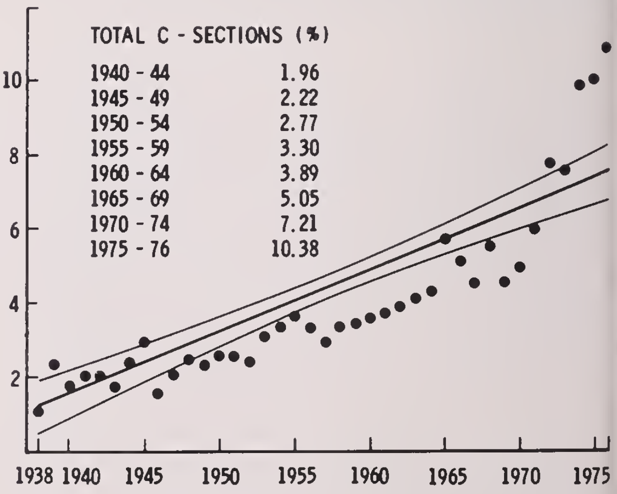


Fig. 2 The percent of cesarean sections per total deliveries from 1938 through 1976 with five-year averages and linear regression line and 95% confidence limits as calculated on the mean.

TABLE 2
INDICATIONS FOR C-SECTION (PERCENT)

Indication	*SMHC: 1956-1976**	*Obstetrical Statistical* Cooperative (Williams) 1951-1962*	*Charlotte Memorial 1963-1975*	*University of Uppsala Hospital 1966-1970*
(Total number)	(1,829)	(9,680)	(2,563)	(719)
Cephalopelvic disproportion	38.1 (43)†	27.7	49	39.4
Malposition	10.2 (12.3)	8.9	18.3	6
Lack of progress	6.7 (9.6)	8.9	4.7	1.4
Toxemia	3.3 (5.5)	3.6	3	2.4
Placenta praevia	11 (4.3	11.2	4.6	5.4
Abruptio placentae	9 (2.7)	7.5	3.9	5.4
Fetal distress	8 (11.9) [18.2]‡	10.4	7.6	15.2
Cord prolapse	3.3 (3.3)	6	2.8	1.5
Medical	2.5 (2.1)		6.7	7.3
Other	8.3	15.8		16

* Primary sections only (the other two studies include both primary and repeat C-sections).

† Numbers in parentheses indicate the percent occurrence for each indication during the years 1972 through 1976.

‡ Figure in brackets indicates the percent occurrence during the year 1975, which is the only year outside two standard deviations from the average for all 21 years. If this figure is eliminated from the years 1972 through 1976, then the percent occurrence in that period is 10.2.

Table 2 presents a tabulation of the indications for 1,829 primary cesarean sections done between 1956 through 1976 and compares this series with other published series.[2-5] Fig. 3 shows the changing incidence of primary cesarean sections for placenta praevia, abruptio placentae and cephalopelvic disproportion (CPD). The incidence of primary cesarean sections for fetal distress has shown a significant increase of one half of 1% per year from 1956 through 1976 ($Y = 3.2 + .478 \times$, $t_{17} = 8.101$, $p < .001$).

TABLE 3
MATERNAL DEATHS: 1939-1976

Direct obstetrical deaths	
Toxemia	7
Hemorrhage	3
Ruptured uterus	1
Amniotic fluid embolism	1
Indirect obstetrical deaths	
Cerebral hemorrhage (not related to toxemia)	4
Myocardial infarction	2
Chronic glomerular nephritis	1
Pulmonary edema secondary to aspiration	1
Hemorrhagic pancreatitis	1
Bacterial endocarditis	1
Mesenteric thrombosis	1
Unrelated obstetrical deaths	
Leukemia	2
Suicide	1
Polioencephalitis	1
Pneumonia	1
Burns	1
Ulcerative colitis	1
Perforated caecum	1
Total	31

Maternal mortality attributed to cesarean section has been low (0.07%). Three deaths were associated with cesarean sections: one in 1939 (abruption), one in 1942 (postpartum hemorrhage) and one in 1950 (pre-eclampsia). There have been no cesarean sections related to maternal death at SMHC since 1950. Although the overall mortality resulting from cesarean section deliveries is higher than for vaginal deliveries (7.14 per 10,000 deliveries versus 2.59 per 10,000 deliveries), there is no statistical difference between the rates (X^2 dfl $= 1.6086$, $p < .1$, NS). Table 3 lists the causes of maternal deaths during the interval studied.

The authors review the operative obstetric experience at St. Mary's Health Center from 1938 through 1976. A significant decrease in the incidence of all types of forceps deliveries and the use of general anesthesia for vaginal deliveries show a significant correlation with a decreasing perinatal mortality.

Dr. Ott is Assistant Professor of Obstetrics and Gynecology at St. Louis University School of Medicine and Director of Clinical Perinatology at the University and the Health Center. Dr. Ritter is Professor of Clinical Obstetrics and Gynecology and former Acting Chairman, Department of Obstetrics and Gynecology at St. Louis University.

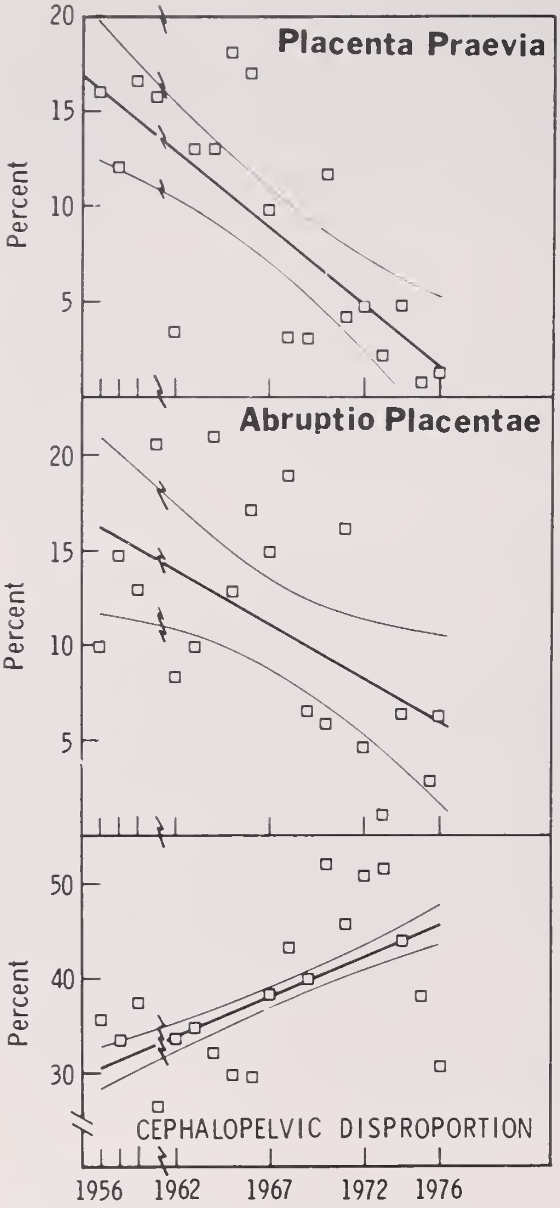


Fig. 3 The percentage of primary cesarean sections done for abruptio placentae, placenta praevia and cephalopelvic disproportion from 1956 through 1976. Broken lines indicate that the data for the years 1960 and 1961 were missing.

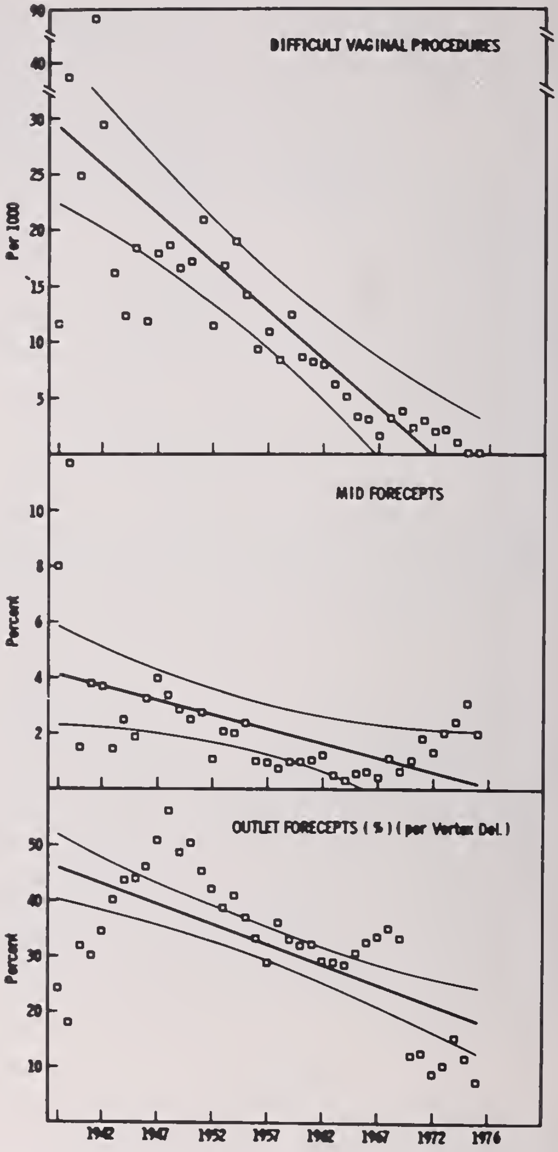


Fig. 4 Occurrence rates of difficult vaginal procedures (high forceps, breech extractions and version-extractions) per 1,000 deliveries; mid-forceps deliveries per 100 vaginal deliveries; and outlet forceps deliveries per 100 vaginal deliveries, with the linear regression lines and 95% confidence limits as calculated on the mean for the years 1938 through 1976.

Forceps Deliveries: The occurrence rate for forceps deliveries during the 39-year period is shown in Fig. 4. There was a significant decrease in the occurrence of all types of forceps deliveries.

Correlations: Figs. 5 & 6 show the coefficient of correlation between perinatal mortality and the mode of delivery.

Perinatal Mortality: Detailed data on causes of perinatal deaths were available from 1969 through 1976. The causes of perinatal deaths are illustrated in Table 4.

DISCUSSION

The rapid increase in the utilization of the cesarean section for delivery since 1965 is similar to the experience reported by other centers and correlates well (Fig. 5) with diminishing perinatal mortality.$^{5-7}$ A more active approach to obstetrical

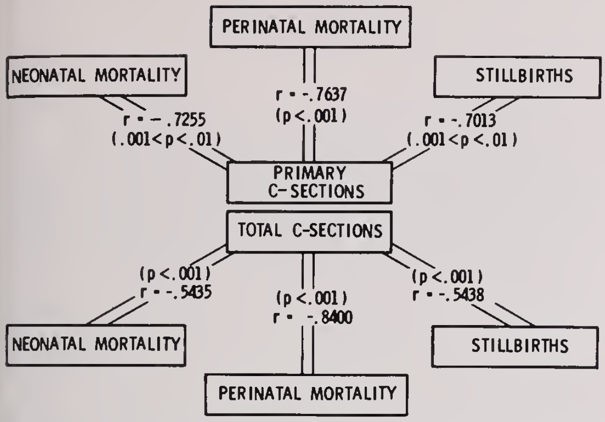

PERINATAL MORTALITY
NEONATAL MORTALITY
STILLBIRTHS
r = -.7637
(p<.001)
r = -.7255
(.001<p<.01)
r = -.7013
(.001<p<.01)
PRIMARY C-SECTIONS
TOTAL C-SECTIONS
(p<.001)
r = -.5435
(p<.001)
r = -.8400
(p<.001)
r = -.5438
NEONATAL MORTALITY
STILLBIRTHS
PERINATAL MORTALITY

Fig. 5 Correlation coefficients and p values for cesarean sections and various aspects of perinatal mortality.

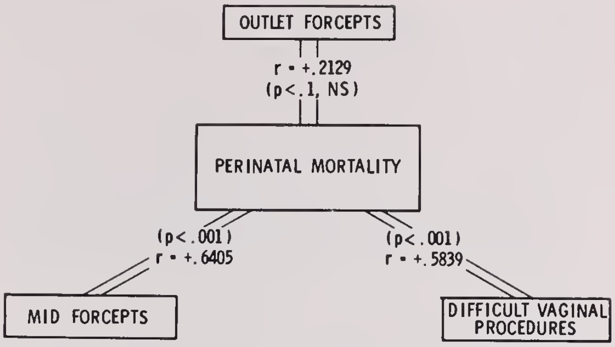

OUTLET FORCEPTS
r = +.2129
(p<.1, NS)
PERINATAL MORTALITY
(p<.001)
r = +.6405
(p<.001)
r = +.5839
MID FORCEPTS
DIFFICULT VAGINAL PROCEDURES

Fig. 6 Correlation coefficients and p values for perinatal mortality and operative vaginal deliveries.

problems (such as abnormal labor patterns, abnormal presentations, or premature rupture of the membranes) coupled with the use of electronic monitoring to diagnose early fetal distress may contribute to the increasing cesarean section rate.

The decrease in the incidence of primary cesarean sections for placenta praevia and abruptio placentae may be related to a decrease in the occurrence of these conditions at SMHC or it may be related to an increase in cesarean sections for other indications, but the rate of decrease in the incidence of placenta praevia and abruptio placentae from 1956 through 1976 is not statistically significant ($Y = 14.09 - .425 \times$, $t_{21} = 2.0161$, $p < 0.1$). However, a comparison of the occurrence rates for 1956 through 1960 (14.9 per 1,000 deliveries) to the occurrence rates in 1972 through 1976 (7.83 per 1,000 deliveries) does show a significant decrease (x_2 1df = 28.2935, $p < .001$).

One of the factors frequently attributed to be a cause of increasing cesarean section rates is an increase in the number of clinic deliveries. Table 5 illustrates that this has not been the case at SMHC. There was a 5% to 15% increase in clinic deliveries from 1970 through 1976, but this did not increase cesarean section rates for clinic patients to any greater degree than for private patients.

The use of electronic fetal monitoring deserves further comment. Many investigators have reported an increase in cesarean section rates with the advent of electronic monitoring.[5-7] Electronic monitoring was first utilized at SMHC in the fall of 1973 and, as shown in Table 4, there was a notable increase in the incidence of primary cesarean sec-

TABLE 4
CAUSES OF PERINATAL MORTALITY (%): 1969-1976

Respiratory distress syndrome	18.4
Congenital abnormalities	18.3
Immaturity	16.6
Abruptio placentae	14.5
Erythroblastosis	11.8
Cord problems*	10.2
Placenta praevia	3.6
Anoxia	3.2
Infection	2.6
Intercranial hemorrhage	0.8

* Includes prolapse, true knots and rupture.

TABLE 5
TOTAL C-SECTIONS SMHC

Year	*Clinic (%)*	*Private (%)*
1970	0.76	5.12
1971	3.13	6.07
1972	5.52	7.92
1973	5.44	7.68
1974	3.77	10.22
1975	3.83	10.88
1976	4.72	11.91

Mean ± SD 3.88 ± 1.64 8.54 ± 2.54 (X^2 dfl = 27.78, $p < .001$).

TABLE 6
PRIMARY C-SECTIONS: MONITORED vs UNMONITORED

Year	*Monitored*	*Unmonitored*
1973*	41.2	4.7
1974	17.0	6.6
1975	16.5	7.9
1976†	9.1	10.6

* Three months.
† X^2 dfl = 1.0991, $p > 0.1$, NS.

tions in the electronically monitored group for the first 27 months. However, after sufficient experience had been gained in interpretation of fetal monitoring data in 1976, the incidence of primary cesarean sections in the monitored and unmonitored group was essentially identical. This has been the experience at many other centers.[5-7]

The use of operative vaginal procedures (Fig. 4) has shown a steady decrease over the 39-year interval. This correlates statistically with the improvements in perinatal mortality (Fig. 6). The use of statistical correlation coefficients does not prove cause and effect relationships, but it does support the theory that decreasing the use of difficult vaginal operative procedures and increasing the utilization of cesarean sections may result in a decrease in perinatal mortality.

References

1. Luafe, L. E.: Obstetrical Forceps. New York, Harper and Row Publishers, 1968, p. 57.
2. Amato, J. C.: Fetal Monitoring in a Community Hospital. Obstet. Gynecol. 50:269-274, 1977.
3. Johnell, H. E., Ostberg, H. and Wahlstrand, T.: Increasing Cesarean Section Rate. Acta Obstet. Gynecol. Scand. 55:95-100, 1976.
4. Jones, O. H.: Cesarean Section in Present-Day Obstetrics. Am. J. Obstet. Gynecol. 126:521-530, 1976.
5. Gabert, H. A. and Stenchever, M. A.: The Results of a Five-Year Study of Continuous Fetal Monitoring on an Obstetrical Service. Obstet. Gynecol. 50:275-279, 1977.
6. Ott, W. J.: Current Status of Intrapartum Fetal Monitoring. Obstet. Gynecol. Surv. 31:339-364, 1976.
7. Paul, R. H.: Biophysical Diagnosis of Fetal Distress, Second International Perinatal Symposium. Las Vegas, Nevada, April 6, 1977.

Reprints: William J. Ott, M.D.
Saint Mary's Health Center
6420 Clayton Rd.
St. Louis, Mo. 63117

Allen Test

(Continued from page 83)

The percentage of patients with inadequate collateral flow is unknown. In a personal series of 200 consecutive Allen Tests done in a hospital population of adults without upper extremity problems, there was a 2.5% incidence of positive results. These five patients all demonstrated ulnar artery occlusion and would have been at great risk if a radial artery catheterization had been done. The frequent use of intra-arterial catheters, however, mandates that we identify this small group of patients and avoid the use of an indwelling catheter in this situation. Performing an Allen Test whenever the placement of the catheter is considered should obviate this occurrence. A physician must take care to look not only for flush of the individual vessel distributions, but for full flush of the hand (collateral flow) as well. In addition, those patients with preexisting radial or ulnar artery occlusion will be identified and excluded from indwelling catheter use.

The catastrophic sequelae of thrombotic occlusion of the major arteries to the hand in the absence of adequate collateral flow cannot be minimized from a medical or legal standpoint. While life threatening aspects must take precedence over other matters in the care of severely ill patients, the addition of this test to our routine armamentarium should help differentiate patients likely to have problems with indwelling arterial catheters.

DON'T MISS

. . . This Excellent Scientific Program

. . . The Public Affairs Breakfast

. . . The Sessions of the House of Delegates

. . . The Outstanding Exhibits

. . . The Annual Presidents' Banquet

121st MSMA Annual Session—April 19-22, 1979

JOHN S. MEYER, M.D., SUE C. STEVENS, Ph.D.
and WILMA L. WHITE, *St. Louis*

Carcinoma of the Breast: The Role of Estrogen and Other Receptor Determinations

MEASUREMENTS OF ESTROGEN RECEPTOR (ER) and, more recently, progesterone receptor (PgR) have been performed with increasing frequency as guides to the therapy of breast carcinoma during the last few years. Current observations indicate that their importance may transcend the prediction of hormonal responsiveness, for they appear to define subsets of carcinomas with different age-specific incidences, growth rates and natural histories. In our laboratory, assay of breast carcinomas for ER has been performed routinely for three years, and we have accumulated an experience with more than 600 specimens.

ESTROGEN RECEPTOR

The first published report of treatment of breast carcinoma by hormonal means was by the British surgeon, Beatson, and appeared in the *Lancet* in 1896.[1] Interest in this form of therapy did not become sustained until a report on the responsiveness of advanced breast carcinoma to adrenalectomy by Huggins and Bergenstal in 1952.[2] Since then, approximately 40% of premenopausal patients with metastatic or recurrent breast carcinoma have been shown to respond to ovariectomy and 20% to 25% of postmenopausal patients to adrenalectomy or hypophysectomy with objective remissions that have a median duration of approximately one year.[3, 4] Postmenopausal patients also respond to additive hormonal therapy (response rate of approximately 35% for estrogen and 20% for androgen)[5, 6] and, at present, hypophysectomy and adrenalectomy are usually reserved for responders to castration or additive hormonal therapy who subsequently have relapsed. Antiestrogens have recently been used in both younger and older patients with encouraging results. Objective response rates reported for antiestrogens, chiefly tamoxifen, have approached an average of 35%.[7, 8]

Cytotoxic chemotherapy is capable of inducing remissions in a higher proportion of unselected patients than hormonal therapy, but the median duration of chemotherapy-induced remissions of approximately six to 12 months in most reports[9, 10] has been no longer than with hormonal therapy.

Jensen and Jacobson's demonstration of preferential binding of estrogens to target tissues[11] was followed by the observation by Folca that breast carcinomas capable of binding radioactive estrogens had a high response rate to hormonal therapy.[12] Toft and Gorski described binding of estrogens to a cytoplasmic component of endometrium that fulfilled characteristics of a specific receptor protein in 1966.[13] [The receptor has recently been purified in Jensen's laboratory.[14]]

Jensen and coworkers reported identification of estrogen receptor in breast carcinomas in 1967.[15] Since then, experience in many laboratories has shown that approximately 60% of breast carcinomas contain appreciable amounts of ER and approximately 60% of ER-positive carcinomas respond to various types of hormonal therapy (ablative, additive, antiestrogenic), whereas only 5% to 10% of ER-negative tumors respond.[16] Response rates and durations of responses have been correlated with the magnitude of estrogen-binding per milligram tumor cytosol protein.[8, 17] Assay for estrogen receptor has become an accepted method for selecting patients with advanced breast carcinoma for hormonal therapy. ER-negative tumors are treated by other means, usually cytotoxic chemotherapy.

ER and other steroid receptors are located within the soluble fraction of the cytoplasm (cytosol). The receptors have three identifying characteristics: (1) High affinity binding that is specific for the particular hormonal class (estrogen, androgen, glucocorticoid, progestin) (2) Specificity. Other classes of steroids are not appreciably bound. (3) Saturability by the steroids that are specifically bound.

In other words, the number of binding sites on specific receptors in a given cytosol is strictly limited, and addition of a relatively small excess of nonradioactive steroid will prevent binding of

Estrogen receptor (ER) is one of a class of specific steroid receptor proteins found within the soluble fraction of target tissues. ER assay has been offered by many laboratories during the last few years as a guide to therapy of patients with advanced stages of breast carcinoma and, more recently, progesterone receptor (PgR) has been found to have predictive value in response to hormonal therapy. This review includes a discussion of principles of ER assay, specimen acquisition and storage, and interpretation.

The authors are from the Department of Pathology, Jewish Hospital of St. Louis.

radioactive steroid. Nonspecific binders (albumin, lipids and others) lack the feature of saturability and, in addition, show lower affinity for the steroid and nonspecificity of binding.

Chan and O'Malley[18] and Jensen and DeSombre[15, 19] have reviewed the mechanism of action of sex steroid hormones. In brief, the steroid is thought to diffuse across the cell membrane where it is bound by the receptor. The receptor undergoes a change in configuration that permits the steroid-receptor complex to migrate into the nucleus and bind to deoxyribonucleic acid (DNA). The result is an increase in transcription of messenger ribonucleic acid (RNA) which leaves the nucleus and directs protein synthesis in the cytoplasm. In certain tissues, such as endometrium, breast and carcinomas that contain ER, growth and multiplication of cells result. Deprivation of estrogen causes slowing or cessation of these processes. It has been possible to demonstrate these events in experimental breast tumors and in cultured human breast carcinoma cells that contain ER.[20]

Assay for ER currently involves detection of specific or saturable binding of tritiated estradiol (^{3}H-E2). The simplest and most widely used method employs cytosol prepared from breast carcinoma by high speed centrifugation. A known amount of ^{3}H-E2 is added to the cytosol. After a period of incubation in the cold, unbound and weakly bound ^{3}H-E2 is removed by adsorption onto dextran-coated charcoal.[21] One can also use columns or electrophoresis to separate bound from unbound ^{3}H-E2. In our laboratory, we confirm the specificity of binding by calculation of the dissociation constant from a Scatchard plot[22] and by measuring saturability with nonradioactive estradiol. The dissociation constant of the ^{3}H-E2 – ER complex is approximately 10^{-10} M. Fractionation of the cytosol + ^{3}H-E2 mixture on ultracentrifugal gradients can demonstrate specific binding that sediments with two different peaks, 8S and 4S. The 8S peak is considered specific for ER, whereas the 4S peak may or may not represent ER in a given case.

ER is present in only small amounts and, consequently, specific binding of ^{3}H-E2 is measured in femtomoles (fM) per mg cytosol protein or per gram of wet tumor (one fM = 10^{-15} M). Ten fM/mg cytosol protein is roughly equivalent to 150 fM/g wet tumor. In our laboratory, we consider tumors that have saturable binding of at least 10 fM ^{3}H-E2 per milligram cytosol protein to be positive for ER.

Several precautions should be observed in obtaining and interpreting assays of breast carcinomas for ER. The receptor is very labile and deteriorates when stored at room temperature in a matter of minutes or, at most, hours. It is sensitive to freeze-thaw cycles, but it can be preserved for weeks by maintaining frozen tissue at dry ice (−76.5 C) temperature.[23] Once cytosol has been prepared, it should be assayed and not refrozen. Obviously, electrocautery should not be used when removing cutaneous breast carcinoma recurrences for ER assay. The specimen must be trimmed of fat, skin and necrotic areas prior to being frozen. We have been able to obtain valid assays with as little as 200 mg of tissue, but we prefer to receive approximately 1 gm. A 1 cm diameter sphere weighs 0.52 gm, and one gm of tissue is about the size of a sugar cube.

Very high circulating levels of estrogen may result in spurious assay results by depleting ER binding sites through two mechanisms: (1) translocation of ER into the nucleus and (2) occupation of binding sites by endogenous estrogen. We have found that plasma or serum estradiol levels of less than 300 pg/ml do not interfere with the test, but we have not observed positive results with plasma estradiol levels higher than 700 pg/ml. During pregnancy, circulating estradiol levels are in the thousands of pg/ml, and special assay methods that are beyond the capability of the ordinary laboratory would be necessary. We recommend that a sample of blood for measurement of estradiol-17β be obtained at the time of biopsy of carcinoma. We reserve judgement when we encounter negative assay results in the presence of serum estradiol levels in excess of 300 pg/ml.[23]

The cellularity of the tumor is an important determinant of whether the assay will be able to detect ER. A sample from the center of the portion submitted for assay should always be evaluated histologically. If the proportional volume occupied by breast carcinoma cells is less than 0.2, false-negative assays may be obtained.[23] Breast carcinoma metastatic to axillary lymph nodes is usually more highly cellular than the primary lesion in the breast. This is particularly true in the case of lobular carcinoma. Therefore, a sample from an axillary metastasis, when present, should be assayed together with a sample from the primary tumor. In our experience, samples taken simultaneously from primary breast carcinomas and from their axillary metastases have shown similar content of ER when they have been of comparable cellularity. Tissue recovered from the mastectomy specimen gives valid assay results provided that it is prepared and frozen within 30 minutes after completion of the mastectomy.[23]

Progesterone Receptor

Progesterone receptor (PgR) can be detected in approximately 75% of breast carcinomas that contain ER and in only 10% of those that lack ER.[24, 25] Assays are similar to the ER assay with precautions to avoid interference by transcortin, the plasma protein that binds hydrocortisone and progesterone. The synthetic progestin, R5020, is often used as a marker for PgR because R5020 is not bound by transcortin. McGuire and coworkers[24] recently reported that 64% of breast carcinomas that were ER-positive and PgR-positive responded to hormonal therapy, whereas only 39% of ER-positive, PgR-negative tumors responded. Thus PgR assay contributes to the prediction of hormonal responsiveness.

Other Receptors

Glucocorticoid receptor, androgen receptor and prolactin receptor (the latter a protein located in the cell membrane rather than in the cytosol) can be identified in appreciable proportions of breast carcinomas. They have not yet proved to be useful in routine management of the disease. The observation that some breast carcinomas lacking in ER have androgen receptors has led to the trial of combined antiestrogen and additive androgen therapy.[26]

Significance of ER Apart From Prediction of Hormonal Responsiveness

Populations of ER-positive breast carcinomas appear to be different from populations of ER-negative tumors. Although some overlap of characteristics occurs, the ER-positive tumors are more often slow-growing and occur in older women more often than ER-negative tumors. ER-negative tumors tend to occur in young women,[23] and their high rates of thymidine uptake and tendency toward early recurrence indicate that they are rapidly growing.[27, 28] The ER assay has prognostic value, which apparently comes from the fact that ER-positive breast carcinomas are in general better differentiated and slower growing than ER-negative tumors.[29] These associations may also account for the observation by Lippman and coworkers that ER-negative breast carcinomas were more responsive to cytotoxic chemotherapy than ER-positive carcinomas.[30]

However, Kiang and associates recently reported opposite findings,[31] and the relationship between ER content and cytotoxic responsiveness requires further study.

Recommendations

Breast carcinomas should all be assayed for ER and PgR at the time of initial therapy. With traditional surgical treatment, 65% or more of women will ultimately develop metastatic carcinoma.[32] Tissue is difficult to obtain for ER assay from visceral and osseous metastases, and stability of ER status over time indicates that results of assay of the primary tumor can be used to plan therapy of recurrences or metastases.[33] Recurrences or metastases should be assayed when available to biopsy. ER-positive and, particularly, ER-positive, PgR-positive recurrent or metastatic tumors should be treated hormonally.[34] ER-negative and known hormone-resistant tumors should be treated by cytoxic chemotherapy. Oophorectomy is the first line of hormonal treatment in premenopausal patients, and additive hormones or antiestrogens are the first line of treatment in postmenopausal women. The reasons for response of ER-positive breast carcinomas in postmenopausal women to additive estrogenic therapy are poorly understood. Medical[35] or surgical adrenalectomy or hypophysectomy may be used to treat patients who relapse after response to first line hormonal therapy. Radiation therapy is highly effective against localized symptomatic lesions.

Outlook for the Future

Purification of ER[10] holds the promise of more precise assays that may include radioimmunoassay and immunofluorescent (IF) assay. IF assay for ER utilizing polyestradiol phosphate as the ligand has recently been reported.[36] It correlated well with dextran-charcoal and sucrose gradient assays and demonstrated heterogeneity among the cells of most tumors in their content of ER. This technique may be useful in studying patterns of emergence of hormone-independence, and it may be applicable as a test for ER in the ordinary histopathology laboratory. Radioimmunoassay utilizing antibodies to ER might permit detection of ER released into the plasma from tumors so that determination of hormonal responsiveness could be done without biopsy of the tumor. Trials are under way to ascertain whether adjuvant hormonal therapy is beneficial to patients with ER-positive tumors at the time of initial therapy. Development of antiestrogens and pharmacologic agents, such as aminoglutethimide[35] to block synthesis of adrenal estrogenic precursors promises to decrease the need for surgical endocrine ablation in therapy of hormonally responsive breast carcinomas.

REFERENCES

1. Beatson, C. T.: On the Treatment of Inoperable Cases of Carcinoma of the Mamma; Suggestions for a New Method of Treatment With Illustrative Cases. Lancet 2:104, 162, 1896.

2. Huggins, C. and Bergenstal, D. M.: Inhibition of Human Mammary and Prostatic Cancers by Adrenalectomy. Cancer Res. 12:134, 1952.

3. MacDonald, I.: Endocrine Ablation in Disseminated Mammary Carcinoma. Surg. Gynec. Obst. 115:215, 1962.

4. Newsome, H. H., Brown, P. W., Terz, J. J. and Lawrence, W., Jr.: Medical and Surgical Adrenalectomy in Patients With Advanced Breast Carcinoma. Cancer 39:542, 1977.

5. Kennedy, B. J.: Hormonal Therapies in Breast Cancer. Semin. Oncol. 1:119, 1974.

6. Legha, S. S., Davis, H. L. and Muggia, F. M.: Hormonal Therapy of Breast Cancer: New Approaches and Concepts. Ann. Intern. Med. 88:69, 1978.

7. Lerner, H. J., Band, P. R., Israel, L. and Leung, B. S.: Phase II Study of Tamoxifen: A Report of 74 Patients With Stage IV Breast Cancer. Cancer Treat. Rep. 60:1431, 1976.

8. Moseson, D. L., Sasaki, G. H., Kraybill, W. G., Leung, B. S., Davenport, C. E. and Fletcher, W. S.: The Use of Antiestrogens Tamoxifen and Nafoxidine in the Treatment of Human Breast Cancer in Correlation With Estrogen Receptor Values. A Phase II Study. Cancer 41:797, 1978.

9. Canellos, C. P., Pocock, S. J., Taylor, S. G. III *et al:* Combination Chemotherapy for Metastatic Breast Carcinoma. Prospective Comparison of Multiple Drug Therapy With L-Phenylalanine Mustard. Cancer 38:1882, 1976.

10. Jones, S. E., Durie, B. G. M. and Salmon, S. E.: Combination Chemotherapy With Adriamycin and Cyclophosphamide for Advanced Breast Cancer. Cancer 36:90, 1975.

11. Jensen, E. V. and Jacobson, H. I.: Basic Guides to the Mechanism of Estrogen Action. Recent Prog. Horm. Res. 18:387, 1962.

12. Folca, P. J., Glasscock, R. F. and Irvine, W. T.: Studies With Tritium-Labeled Hexestrol in Advanced Breast Cancer. Lancet 2:796, 1961.

13. Toft, D. and Gorski, J.: A Receptor Molecule for Estrogens; Isolation From the Rat Uterus and Preliminary Characterization. Proc. Natl. Acad. Sci. USA 55:1574, 1966.

14. Greene, G. L., Closs, L. E., Fleming, H. *et al:* Antibodies to Estrogen Receptor: Immunochemical Similarity of Estrophilin From Various Mammalian Species. Proc. Nat. Acad. Sci. 74:3681, 1977.

15. Jensen, E. V., DeSombre, E. R. and Jungblut, P. W.: Estrogen Receptors in Hormone-Responsive Tissues and Tumors. In: Endogenous Factors Influencing Host-Tumor Balance. Edited by R. W. Wissler, L. L. Y. Dao, S. Woods. Chicago, University of Chicago Press, 1967, p. 15.

16. McGuire, W. L., Carbone, P. P., Sears, M. E. and Escher, G. C.: Estrogen Receptors in Human Breast Cancer: An Oerview. In: Estrogen Receptors in Human Breast Cancer, edited by W. L. McGuire, P. P. Carbone, E. P. Vollmer. New York, Raven Press, 1975, p. 1.

17. Heuson, J. C.: Current Overview of EORTC Clinical Trials With Tamoxifen. Cancer Treat. Rep. 60:1453, 1976.

18. Chan, L. and O'Malley, B. W.: Mechanism of Action of the Sex Steroid Hormones. New Eng. J. Med. 294:1322, 1372, 1430, 1976.

19. Jensen, E. V. and DeSombre, E. R.: Estrogen-Receptor Interaction. Science 182:126, 1973.

20. Lippman, M. C., Osborne, C. K., Knazek, R. and Yung, N.: In Vitro Model Systems for the Study of Hormone-Dependent Human Breast Cancer. New Eng. J. Med. 296:154, 1977.

21. Koreman, S. G.: Radioligand Binding Assay of Specific Estrogens Using a Soluble Uterine Macromolecule. J. Clin. Endocrinol. Metab. 28:127, 1968.

22. Scatchard, G.: The Attraction of Proteins for Small Molecules and Ions. Ann. N.Y. Acad. Sci. 51:660, 1949.

23. Meyer, J. S., Stevens, S., White, W. L. and Hixon, B.: Estrogen Receptor Assay of Breast Carcinoma by Simplified Dextran-Charcoal Method. Am. J. Clin. Path. 70:655, 1978

24. McGuire, W. L., Horwitz, K. B., Pearson, O. H. and Segaloff, A.: Current Status of Estrogen and Progesterone Receptors in Breast Cancer. Cancer 39:2934, 1977.

25. McGuire, W. L., Raynaud, J. P. and Baulieu, E. E.: Progesterone Receptors: Introduction and Overview. In: Progesterone Receptors in Normal and Neoplastic Tissues, edited by W. L. McGuire, J. P. Raynaud, E. E. Baulieu. New York, Raven Press, 1977, p. 1.

26. Tormey, D. C., Simon, R. M., Lippman, M. E., Bull, J. M. and Myers, C. E.: Evaluation of Tamoxifen Dose in Advanced Breast Cancer: A Progress Report. Cancer Treat. Rep. 60:1451, 1976.

27. Meyer, J. S., Rao, B. R., Stevens, S. C. and White, W. L.: Low Incidence of Estrogen Receptor in Breast Carcinomas With Rapid Rates of Cellular Replication. Cancer 40:2290, 1977.

28. Knight, W. III, Livingston, R. B., Gregory, E. J. and McGuire, W. L.: Estrogen Receptor as an Independent Prognostic Factor for Recurrence in Breast Cancer. Cancer Research 37:4669, 1977.

29. Meyer, J. S., Bauer, W. C. and Rao, B. R.: Subpopulations of Breast Carcinoma Defined by S-Phase Fraction, Morphology, and Estrogen Receptor Content. Lab. Invest. In press.

30. Lippman, M. E., Allegra, J. C., Thompson, E. B., Simon, R., Barlock, A., Green, L., Huff, K. K., Do, H. M. T., Aitken, S. C. and Warren, R.: The Relation Between Estrogen Receptors and Response Rate to Cytoxic Chemotherapy in Metastatic Breast Cancer. N. Engl. J. Med. 298:1223, 1978.

31. Kiang, D. T., Frenning, D. H., Goldman, A. I., Ascensao, V. C. and Kennedy, B. J.: Estrogen Receptors and Responses to Chemotherapy and Hormonal Therapy in Advanced Breast Cancer. N. Engl. J. Med. 299:1330, 1978.

32. Brinkley, D. and Haybittle, J. L.: The Curability of Breast Cancer. Lancet 2:95, 1975.

33. Block, G. E., Jensen, E. V. and Polley, T. Z., Jr.: The Prediction of Hormonal Dependency of Mammary Cancer. Ann. Surg. 182:342, 1975.

34. Pearson, O. H.: Endocrine Treatment of Breast Cancer. Cancer 26:165, 1976.

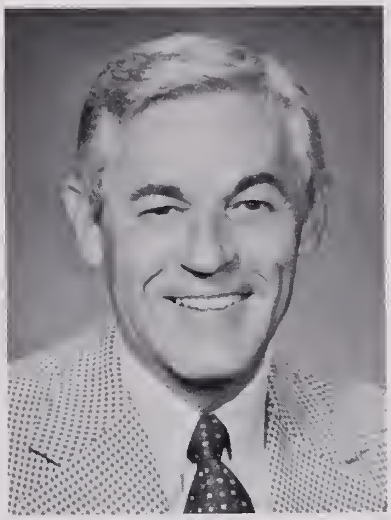
35. Wells, S., Jr., Santen, R. J., Lipton, A., Haagensen, D., Jr., Ruby, E. J., Harvey, H. and Dilley, W. G.: Medical Adrenalectomy With Aminoglutethimide: Clinical Studies in Postmenopausal Patients With Metastatic Breast Carcinoma. Ann. Surg. 187:775, 1978.

36. Pertschuk, L. P., Tobin, E. H., Brigati, D. J., Kim, D. S., Bloom, N. D., Gaetjens, E., Berman, P. J., Carter, A. C. and Degenshein, G. A.: Immunofluorescent Detection of Estrogen Receptors in Breast Cancer. Comparison With Dextran-Coated Charcoal and Sucrose Gradient Assays. Cancer 41:907, 1978.

Reprints: John S. Meyer, M.D.
Dept. of Pathology
Jewish Hospital of St. Louis
216 South Kingshighway
St. Louis, Mo. 63110

The wise are instructed by reason, ordinary minds by experience, the stupid by necessity and brutes by instinct. — Cicero

President's Message



John N. Martin, M.D.

VOLUNTARISM

The MSMA Impaired Physician Program was conceived from the words of James Allen, "A strong man cannot help a weaker unless that weaker is willing to be helped, and, even then, the weak man must become strong of himself; he must, by his own efforts, develop the strength which he admires in another. None but himself can alter his condition."

We need volunteers to help those who need our help.

James Allen also said, "In all human affairs, there are efforts and there are results, and the strength of the effort is the measure of the results."

The "Key Contact" concept being developed by the MSMA Legislative Committee needs just one thing to be successful and that is for every member of the MSMA to be a "Key Contact." Remember, there is no limit to what can be accomplished if it doesn't matter who gets the credit.

After you all become more involved in our legislative process, you will realize the truth in what Josh Billings said, "I have finally come to the conclusion that a good, reliable set of bowels is worth more to a man than any quantity of brains."

We need volunteers to state our thoughts about legislation. So, won't you, as physicians of Missouri, be "Key Contacts" and talk to the legislators you know. Information on any bill is available to you by contacting the MSMA office (dial 314-636-5151).

You think things are changing? Years ago, Will Rogers said, "About all I can say for the United States Senate is that it opens with a prayer and closes with an investigation."

To this, we agree — "My reading of history convinces me that most bad government has grown out of too much government." — J. S. Williams.

The other way to become involved politically is to be a member of your MMPAC. Remember that a dollar here and a good word there will mean more than what the Washington leaders can do for you or to you.

May the March wind blow the snow out of your rumble seat.

MSMA Auxiliary

Mrs. A. J. Campbell
President

I am happy to present our AMA-ERF cochairmen as guest columnists this month. They present interesting information and a report on the record of our county auxiliaries.

Janet Campbell

AMA-ERF Countdown

The MSMA Auxiliary is starting its countdown on the progress for medical education in another year. It is our hope that you will continue to support our AMA-ERF efforts. We do again urge MSMA members to make your personal AMA-ERF contributions through your own *local county medical society auxiliary* instead of sending it directly to the AMA. This will enable your county auxiliary to receive credit for your donation. As always, you can designate the destination of your funds.

Members of the county auxiliaries have been working hard at various projects to raise these funds. They include the silent auctions, which offer delicious home-baked goods, home-canned items, handcrafted items; Christmas sharing cards; and Christmas cards. Following is a listing of the funds and how they were raised. You will be interested in the record for your county.

County Auxiliary	*Christmas Sharing Card*	*Christmas Cards*	*Unspecified Donations*	*Auction*	*Honorarium or Memoriam*
Boone		$40.90	$ 405.00		
Buchanan	$315.32		145.00		
Cape			600.00		
Cole	260.00				
Dunklin			60.00		$90.00
Franklin-Gasconade-Warren			10.00		15.00
Grand River		15.00		$360.00	
Greene			110.00		43.00
Jackson	520.00		1,345.00		65.00
Johnson		25.80			
Miller-Morgan-Moniteau			16.00		
Pettis	380.00				
City of St. Louis			548.45		80.00
St. Louis County	850.00				
Saline		25.40			

Thank you again, for your continued support of the AMA Education and Research Foundation.

Mrs. Donald C. Sanders, *Chairman*
Mrs. George P. Williams, *Cochairman*

The Great Laxative Escape

COLACE®
dioctyl sodium sulfosuccinate

Colace means escape—from laxative stimulation, from laxative harshness, from laxative habit. Colace gently helps soften stools for easy, painless, unstrained elimination. It's the great laxative escape, from infancy to old age. Available in 100 and 50 mg. capsules. Syrup or liquid.

MeadJohnson
PHARMACEUTICAL DIVISION

©1978 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. J578-1

This asthmatic isn't worried about his next breath...

he's active he's effectively maintained on

QUIBRON®

Each capsule or tablespoonful (15 ml) liquid
contains theophylline (anhydrous) 150 mg
and glyceryl guaiacolate (guaifenesin)
90 mg

- theophylline for effective around-the-clock bronchodilator therapy
- 100% free theophylline

Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis and pulmonary emphysema

Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.

Precautions: Use with caution in patients with cardiac disease hepatic or renal impairment Concurrent administration with certain antibiotics, i.e clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent Safe use in pregnancy has not been established Use in case of pregnancy only when clearly needed

Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa with possible gastric discomfort nausea and vomiting The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml

How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Liquid in bottles of 1 pint and 1 gallon.

See package insert for complete prescribing information.

Mead Johnson

PHARMACEUTICAL DIVISION

© 1979 Mead Johnson & Company • Evansville, Indiana 47721 U S A MJL 6-4220R4

Special Report

New MSMA Statewide Program Offers Assistance to the Impaired Physician

---

After receiving the report and recommendations of the MSMA Ad Hoc Committee on the Impaired Physician, the 1978 House of Delegates voted to appoint a Standing Committee on the Impaired Physician to establish and implement a program to provide rehabilitative assistance for Missouri physicians with alcohol or drug dependencies. Dr. Donald E. McIntosh, Kansas City, presented the ad hoc committee report and also is chairman of the standing committee. Committee members are Dr. Arnold S. Block, St. Louis; Dr. Henry V. Guhleman, Jefferson City; Dr. David L. Ohlms, St. Louis; and Dr. James E. Young, Kansas City.

AS DIRECTED BY the Missouri State Medical Association House of Delegates in April, 1977, the Committee on the Impaired Physician has established a statewide program for locating, contacting and offering rehabilitative assistance to physicians who have become impaired due to addiction to alcohol or mood-altering drugs.

It has been estimated that as many as 17,000 physicians in the United States are disabled by alcoholism, drug dependence or mental illness. Although this is an alarming number of our colleagues, it must be remembered that the vast majority of physicians provide the finest medical care for their patients and cope with the stress associated with their work. It is the small minority of "sick" physicians whom the committee will endeavor to help. Although the unethical, the incompetent and the physician suffering from mental or physical disability are areas of concern, the Committee feels that for practical purposes, the emphasis will be placed on the alcoholic and drug dependent physicians during the first year of operation.

PROGRAM OBJECTIVES

In developing the program, the following objectives were set by the Committee:

1. To identify physicians who are disabled by reason of their addiction to or abuse of drugs, including alcohol;
2. To maintain strict confidence regarding referrals made by the impaired physician, family or colleagues;
3. To motivate the physician to voluntarily enter a treatment program;
4. To assume an advocacy role on his or her behalf:
5. To aid the physician in reentering professional activities after successful treatment; and
6. To provide a means for protecting his or her patients, medical community, family and the doctor himself from the consequences of nontreatment, incomplete treatment or failure of treatment.

LOCATING THE IMPAIRED PHYSICIAN

To achieve these objectives, one of the first tasks at hand was the problem of locating the impaired physician. The Committee requested that a 24-hour telephone answering and recording system be installed at the MSMA Headquarters. Today, if you dial 314-636-5744, you will hear a short message about the program and will then have as much time as you need to relay any information about yourself, family member or colleague. This information is strictly confidential and will be used only by the Committee. Once a referral is made, the Committee will meet to decide the validity and seriousness of the call.

If help is deemed necessary, the Committee will then assign two physician-confronters to the case. These confronters are fellow physicians who understand the problems associated with alcoholism and drug dependency. The confronters, generally from the physician's area, will meet to acquaint themselves with the case and then either make an appointment or make an unannounced visit.

As in the objectives, the confronters sole purpose and goal is to motivate the physician into a treatment program. If the "sick" physician does enter a treatment center, the confronters will closely follow his or her progress and, upon his recovery, help the physician reenter professional activities.

The Impaired Physician Program is offered only as a help or resource to the "sick" physician and will not be a threat to his professional life. Upon his recovery, all records kept by the Committee will be destroyed. If the physician at first refuses counseling or denies his illness, the confronters may make more visits. If the physician still refuses help, then it may become necessary to refer the problem to the State Board of Healing Arts for its evaluation and action.

Confidentiality

One area that concerns the Committee is that of confidentiality. Every possible means of maintaining this trust will be taken. For the program to be successful, the physicians, family and colleagues must realize that as in a doctor-patient relationship, any information given to the Committee will be privileged and for the use of the Committee and confronters only.

Although this program is in its infancy stage, the eventual success will depend not so much upon the Committee and confronters, but upon you, the MSMA membership. We know now that you will render a much greater service to your impaired colleagues by reporting their problems rather than "covering up" or turning the other way when it becomes apparent. If only one physician is returned to an active and healthy life, the Impaired Physician Program is more than justified.

For MSMA Impaired Physician Program Assistance,

Call 314-636-5744

24-Hour Telephone Answering Service. Calls Are Confidential.

★
Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Borgmann and Philip E. Moppert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
6908 W. 101st Terrace, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

EDITORIAL

LIVING UP TO PRINCIPLES

In my travels, I am frequently asked variations of the same question, "What has the AMA done for me lately?", by disgruntled physicians who often single out our responses to government involvement.

So I tell them what the AMA is doing, in the Congress and the courthouse, to prevent arbitrary government intervention and to preserve the superb, healing quality of American medical education and practice.

Then, I turn the tables. I ask the physician, "What have *you* done lately for the AMA and for American medicine?" I think the question is a fair one and deserves a fair answer. Because as physicians, we have responsibilities as well as rights. And the best way to defend the latter is to fulfill the former, particularly our responsibilities in the socioeconomic and political dimensions of medical care.

And this fulfillment, in turn, can be best achieved through the support of every physician at every level of this federation of ours, including the national level. The AMA deserves support.

I believe that each physician who graduates from a U. S. medical school owes a great debt to the AMA, which played (and continues to play) a leading role in making our medical schools the finest in the world.

I believe that each physician privileged to practice in this country owes a great debt to the AMA, which has long guarded (and continues to guard) those opportunities for medical freedom and creativity found nowhere else in the world.

Finally, I believe that each physician who fails to support the AMA is failing to live up to those traditions and principles upon which the past, present and, ultimately, the future, of American medicine rest.

Such physicians, the "free riders" of medicine, might heed the words of the late Adlai E. Stevenson, the American attorney and diplomat, who said, ". . . it is often easier to fight for principles than to live up to them."

TOM E. NESBITT, M.D.
President, American Medical Association
—Reprinted from the Hampden *Hippocrat*

Keeping Patients Comfortable

Keeping you more comfortable, too

When your patient is most comfortable, you are most effective.

Patient comfort, along with your comfort, are prime considerations in this examination table, available to you from Goetze-Niemer.

Places patients in the examination attitudes best for your work, with least discomfort for you.

Whether you are setting up your first office, or are ready to re-equip...whether you lease or buy, with time plans available...let Goetze-Niemer's helpful professionals work with you, providing the impression that you want to make to your patients.

GOETZE-NIEMER COMPANY

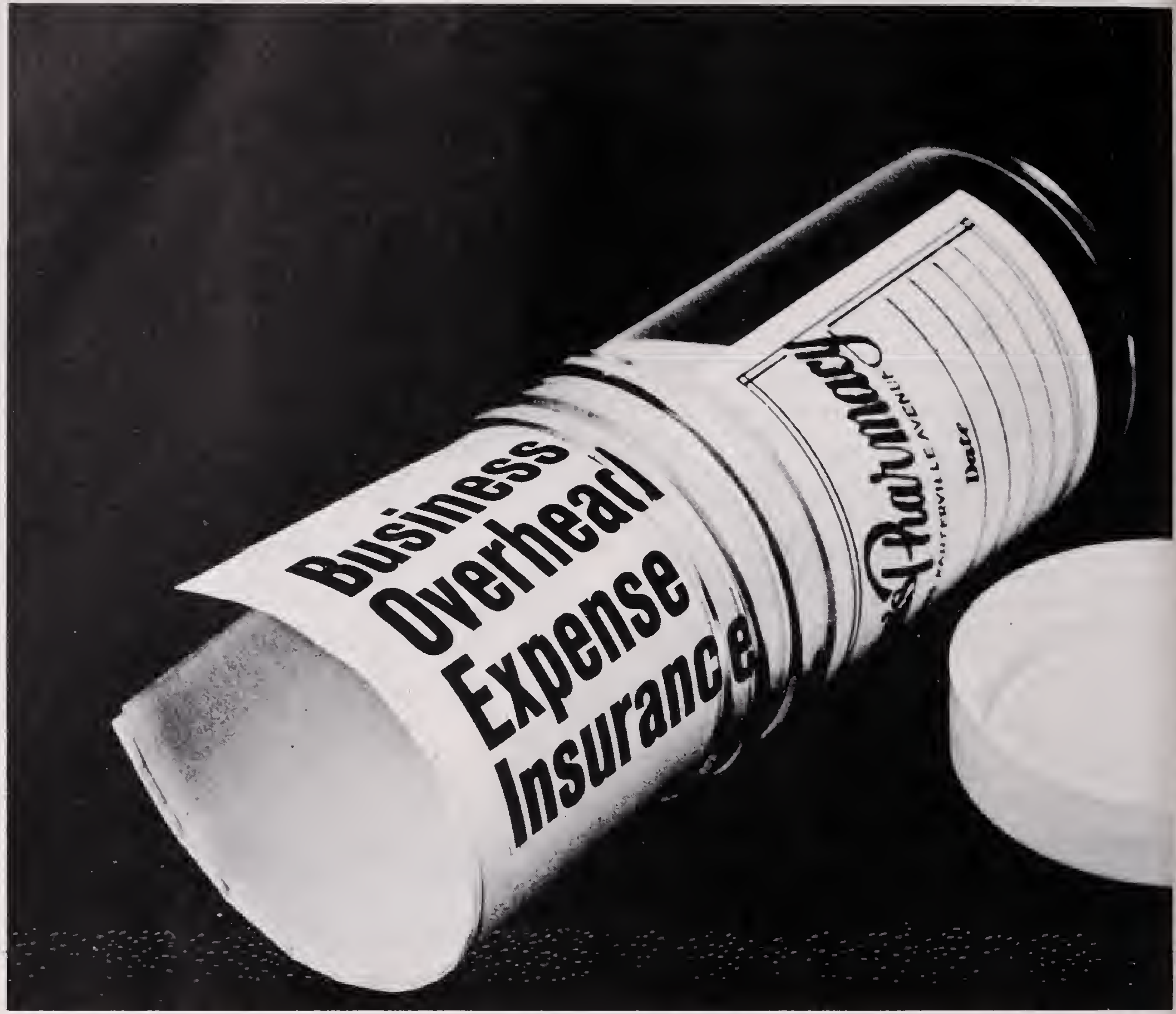
P.O. Box 136—1701 Brooklyn
Kansas City, MO 64141
Phone: 816-231-1900

2611 West Mill St.
Springfield, MO 65802
Phone: 417-865-6511

P.O. Box 187—211 No. 8th
St. Joseph, MO 64502
Phone: 816-279-0804

Frisco Building
Joplin, MO 64801
Phone: 417-624-1040

HOSPITAL AND SURGICAL SUPPLIES—SINCE 1884



A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

Transactions of the Missouri State Medical Association

Third Interim Session

November 4-5, 1978

This report of the 1978 MSMA Interim Session held in Cape Girardeau is designed to provide each member with a concise but complete summary of actions taken by the House of Delegates. The minutes of this session are available to members in the MSMA Headquarters Office in Jefferson City.

Changes in the MSMA Constitution

The following Constitutional changes were proposed at the 1977 MSMA Interim Session and were approved by the Committee on Constitution and Bylaws.

In accordance with the Constitution, these changes have been sent to each component medical society at least two months prior to this meeting and have been published in the Journal of the Association.

Article II, Purpose

The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.

(Article II, Purpose was unanimously adopted and the MSMA Constitution was so amended.)

Article XI, Amendments

The House of Delegates may amend any article of the Constitution by a two-thirds vote of the delegates present and voting at any Annual or Interim Session, provided that such amendment shall have been presented in the previous open meeting of the House of Delegates and that the amendment shall have been published twice during the year in the Journal of the Association or sent officially to each component society at least two months prior to the meeting at which final action is to be taken.

(Article XI, Amendments was adopted and the MSMA Constitution was so amended.)

Special Report from the MSMA Council

Representation on the Council

On April 14, 1978, the Missouri State Medical Association House of Delegates, meeting at its 120th Annual Session, adopted the following Substitute Resolution #10:

Resolved, The House of Delegates directs the Council of the MSMA to bring forth a plan or plans of equitable, democratic representation on the Council to be presented at the Fall Meeting of the House of Delegates for action of the House of Delegates at that time.

Actions by the Council

Representation on the Council

Immediately following the Annual Session, the Council referred the above resolution to the Committee on Planning. As will be noted later in this report, the Committee on Planning met and considered the resolution and offered a plan at the June meeting of the Council.

After considering the Committee on Planning's proposal, the Council felt that additional study of the entire Council representation matter was needed. Each councilor was requested to study the present Council makeup and arrive at suggested changes for consideration by the Council at the September, 1978 meeting.

The Council, at the September meeting, discussed several alternatives and arrived at the four proposals presented to the House in this report. *Proposal #1* is the Council representation plan offered to the House by the Council. *Proposals #2, #3* and *#4* are alternatives which the Council felt the House would want to view.

Representation in the House

Coincidental with the consideration of representation on the MSMA Council, the Council also appraised the recent changes in the makeup of the MSMA House of Delegates and recommends that the House adopt a system of representation which would return the numerical body of the House to approximately 250 members. The present allotment of delegates makes the body unwieldy if all attend and, in truth, presents component medical societies with the problem of locating enough delegates willing to serve.

In light of the above recommendation, the Council believes that the Committee on Planning has presented a germane question when it asks the House, "Should the MSMA House of Delegates remain a federation or should it be changed to a democratic body?"

The Committee on Planning has stated that it can offer no further suggestions for representation in the House until that question is answered.

As a federation, the House is composed of representatives from the component medical societies within the state. As a democratic body, the House would be composed of representatives elected by the individual members of the MSMA.

Proposal by the MSMA Council

As previously mentioned, the Council recommends Proposal #1 concerning representation on the Council.

Proposal #1 — Representation on the MSMA Council

The present District boundaries would be retained, but an additional Councilor would be allowed a District for each 400 members or portion thereof.

This would result in 18 Councilors being elected from the ten Councilor Districts using membership figures as of December 31, 1977. Another change would be that the MSMA Secretary and Treasurer would be elected by the Council *from the Council.* At present, the Council selects both of these officers from the general membership. Therefore, the Council would be composed of the 18 Councilors, President, President-Elect and Past President for a total of 21.

In an effort to reduce some of the confusion and cost of the increased number of Councilors, only one Vice-Councilor would be elected from each district.

The Council is also hopeful that the House will take a position on the "federation" or "democracy" issue during this Interim Session so that the Committee on Planning and the Council can pursue the question of Delegate representation in the House.

(The Reference Committee on Constitution and Bylaws moved that the second paragraph of Proposal #1 be amended to read that the Secretary and Treasurer be elected from the membership [instead of from the Council]. The motion to amend was approved and Proposal #1, was adopted. The amended paragraph reads as follows:

This would result in 18 Councilors being elected from the ten Councilor Districts using membership figures as of December 31, 1977. The MSMA Secretary and Treasurer would be elected by the Council from the MSMA membership. Therefore, the Council would be composed of the 18 Councilors, President, President-Elect, Secretary, Treasurer and Past-President for a total of 23.

Resolutions

Resolution #1 — St. Louis Metropolitan Medical Society

(Introduced by the MSMA Council —
Richard V. Bradley, M.D., Chairman)

Resolved, That St. Louis County and the City of St. Louis shall constitute the MSMA Third Councilor District, and be it further

Resolved, That the counties of Franklin, Gasconade, Warren, Jefferson, St. Charles and Lincoln shall constitute the Fourth Councilor District, and be it further

Resolved, That this action shall be effective January 1, 1979.

(Resolution #1 was adopted.)

Resolution #2 — Cost Effectiveness

(Introduced by the MSMA Council —
Richard V. Bradley, M.D., Chairman)

Resolved, that the Missouri State Medical Association endorses the call by AMA President Tom E. Nesbitt, M.D., for physicians to help moderate increases in medical care costs by avoiding overutilization and by using appropriate restraints to keep fee increases more nearly in line with the annual increase in cost of living, and be it further

Resolved, that the MSMA endorses the Voluntary Effort as a responsible private-sector activity to restrain increases in hospital costs without arbitrary limits or government intervention.

(Resolution #2 was adopted as amended.)

Resolution #3 — Kansas City Blue Shield's Implementation of 'Hold Harmless' Clause

(Introduced by the Commission on Medical Economics,
Third Party Medicine and Governmental Relations —
Max A. Heeb, M.D., Chairman)

Resolved, that the MSMA vigorously opposes the implementation of the so-called "Hold Harmless" clause of the Kansas City Blue Shield Plan as it pertains to nonparticipating physicians, and be it further

Resolved, that the Association's objections to this decision be presented to the Kansas City Blue Shield Board of directors as soon as possible.

(Resolution #3 was adopted as amended.)

Resolution #4 — Withdrawal of the MSMA Endorsement of Title XIX Medicaid Program

(Submitted by the Commission on Medical Economics,
Third Party Medicine and Governmental Relations —
Max A. Heeb, M.D., Chairman)

Resolved, That in view of the continued attempts of the MSMA to reconcile differences with the Division of Family Services and the total lack of cooperation of the Division, the MSMA endorsement of Title XIX Medicaid Program be withdrawn, and be it further

Resolved, That a copy of this resolution be forwarded to the Governor of the State of Missouri and to officials in the Missouri Department of Social Services and the Division of Family Services and certain legislators in the Missouri General Assembly.

(Resolution #4 was adopted as amended.)

Resolution #5 — Component Medical Society Representation to the MSMA House of Delegates

(Submitted by J. Otto Lottes, M.D., St. Louis Medical Society)

Resolved, that the Planning Committee be directed to annually review representation to the MSMA House of Delegates that would consider the following criteria:

1. The total number of delegates be no greater than 200, excluding at-large delegates in the total;
2. A percentage of MSMA members be used to establish the number of delegates representing each component medical society;
3. No component medical society be disenfranchised from representation.

(It was voted to refer Resolution #5 to the MSMA Council.)

Resolution #6 — House of Delegates Meetings

(Introduced by Jackson County Medical Society)

Resolved, that the MSMA continues with the Interim Session in 1979 and 1980. In 1980, the Interim Session is to be reevaluated as to its practicality.

(Resolution #6 was adopted as amended.)

Resolution #7 — AMA Council on Scientific Affairs

(Introduced by Hubert A. Ritter, M.D., St. Louis)

Resolved, that the membership on the Council for Scientific Affairs of the American Medical Association be by appointment of the Board of Trustees, and be it further

Resolved, that the Delegates to the American Medical Association from the Missouri State Medical Association be instructed to work to this end by submitting an appropriate resolution to the American Medical Association House of Delegates for consideration at the Interim Meeting in Chicago, December 1978.

(Resolution #7 was adopted.)

Resolution #8 — Nurse Practitioners

(Introduced by Clay County Medical Association)

Resolved, that the MSMA supports the doctrine that physicians retain control of medical care, and be it further

Resolved, that the MSMA recommends that the State Board of Healing Arts develops acceptable definitions of the terms "medical practice" and "nursing practice" clearly setting forth their separate characteristics and parameters, and be it further

Resolved, that the MSMA challenges any person who is practicing medicine without a license, in the courts of law, if necessary.

(Resolution #8 was adopted as amended.)

Resolution #9 — Confidentiality of Medical Records

(Introduced by Jackson County Medical Society)

Resolved, That the Missouri State Medical Association reiterates its earlier position advocating complete confidentiality for medical records and for professional or peer review activities which are based on review and evaluation of such records; and be it further

Resolved, That this House of Delegates instructs the Association's Council and its AMA Delegates to continue to work vigorously to attain the above stated goals through legislation, regulation or judicial opinion on state and national levels and recommends the amended resolution be adopted.

(Resolution #9 was adopted as amended.)

Resolution #10 — CPR Training in Public Schools

(Introduced by Donald G. Sessions, M.D.,
St. Louis Medical Society)

Resolved, That the Missouri State Medical Association requests endorsement and encourages cooperation of the Missouri Department of Education to add Cardio-Pulmonary Resuscitation (CPR) training for all students in the Missouri public secondary schools.

(Resolution #10 was adopted as amended.)

Resolution #11 — Chiropractic Expansion

(Introduced by Jackson County Medical Society)

Resolved, That the Association's Council be instructed by this House of Delegates to pursue vigorously the above stated intent by all logical and practical means; and be it finally

Resolved, That the Association urges the Missouri State Board of Registration for the Healing Arts to pursue the above stated intent through its work with and influence in the State Department of Consumer Affairs, Regulation and Licensing.

(Resolution #11 was adopted.)

Resolution #12 — Insurance Coverage for Psychiatric Illnesses

(Introduced by Arnold S. Block, M.D., Edward H. Kowert, M.D. and Richard Quick, M.D., St. Louis Medical Society)

Resolved, That the Missouri State Medical Association recommends to the Governor that rules be promulgated that will instruct the State Commissioner on Insurance to require that all health and accident insurance policies sold in the State of Missouri provide coverages for psychiatric illnesses which are equivalent in scope and duration to benefits for other medical and physical illnesses.

(Resolution #12 was adopted as amended.)

Resolution #13 — Standing Committee on Mental Health

(Introduced by David M. Reisler, M.D., St. Louis Medical Society)

Resolved, That the Missouri State Medical Association in conjunction with other concerned specialty societies within the medical profession form an ad hoc committee for the purpose of making visits to each of the major mental health facilities within the State, and be it further

Resolved, That this committee shall evaluate the performance of each institution and the mental health program overall, and be it finally

Resolved, That the committee shall issue a report concerning the functioning of the system. After approval by the MSMA Council or at the discretion of the House of Delegates, the committee's report shall be released to the public.

(Resolution #13 as amended was referred to the MSMA Council for study and implementation.)

Resolution #14 — Reduced Dues for Half-Year Members

(Introduced by Hubert A. Ritter, M.D., St. Louis Medical Society)

Resolved, That the Missouri State Medical Association Bylaws provide membership for physicians leaving training programs and entering practice for the first time at reduced dues for the first calendar year, and be it further

Resolved, That these reduced dues be one-half the annual dues of Active MSMA members, and that these members have the same rights and privileges of Active members, and be it further

Resolved, That the MSMA bylaws be changed to read (changes are underlined):

Chapter VIII, Section 1. (a) The Annual Dues of this Association shall be $115, which shall be applicable to each active member of the Association beginning in 1978 and shall be levied per capita on the active memhers of the component societies; physicians leaving training programs and entering practice for the first time shall be assessed dues of $57.50 for the first calendar year and shall be Active members; the per capita levy for junior members shall be $10.00 per year; honor and associate members shall not be required to pay dues. Dues shall be payable on January 1 of the year for which they are levied.

(b) An assessment of $10.00 per year on each active member of the Association shall be applicable for a three-year period beginning in 1978. The assessment shall be payable with the dues of the Association, and the monies collected therefrom shall be remitted to the Missouri State Medical Foundation.

(c) An assessment of $5.00 per year on each active member who has left his training programs and is entering practice for the first time shall be applicable for one calendar year. The assessment shall be payable with the dues of the Association, and the monies collected therefrom shall be remitted to the Missouri State Medical Foundation.

(Resolution #14 was adopted as amended.)

Resolution #15 — Accreditation of Continuing Medical Education by State Medical Associations

(Introduced by Commission on Continuing Education and Health Manpower)

Resolved, That the Missouri State Medical Association reaffirms the concept of accreditation of continuing medical education by state medical associations whose continuing medical education standards meet American Medical Association continuing medical education standards; and be it further

Resolved, That the Missouri State Medical Association recognizes the Bylaws of the Liaison Committee on Continuing Medical Education (LCCME) only if they provide for the continuation of accreditation of continuing medical education by state medical associations with accreditation standards approved by the AMA; and be it further

Resolved, That the Missouri State Medical Association instructs its delegates to the AMA to support and advance the principle that the Liaison Committee on Continuing Medical Education (LCCME) continues the reciprocal accreditation arrangements by offering accreditation to those hospitals or organizations which have been accredited by AMA approved state medical associations and a resolution to this effect be submitted to the AMA House of Delegates, and be it further

Resolved, That a copy of this resolution be sent to the CME Committee of each state with the recommendation that they support similar activities in their own state.

(Resolution #15 was adopted as amended.)

Resolution #16 — Mumps Immunization for School Children

(Introduced by Boone County Medical Society)

Resolved, That the Missouri State Medical Association goes on record as supporting the vaccination of preschool children against mumps, and be it further

Resolved, That the Missouri State Medical Association recommends to the General Assembly of the State of Missouri that mumps vaccination is important in the immunization of preschool children, and he it further

Resolved, That the Missouri State Medical Association requests the General Assembly of the State of Missouri to amend the Revised Statutes of the State of Missouri, Section 167.181, paragraph 1, line 7, by adding the word, "mumps" after the comma following the word "diphtheria."

(Resolution #16 was adopted as amended.)

Resolution #17 — Consent Calendar

(Introduced by Jackson County Medical Society)

Resolved, That the House of Delegates of the Missouri State Medical Association instructs its Speaker to study the feasibility of adopting the so-called "consent calendar" concept, whereby Reference Committees of the House might identify non-controversial items of business for approval of the House in groups rather than as individual items; and be it further

Resolved, That the Speaker of the House reports back to the House at its next Annual Session on the results of his study and with such recommendations as he may deem appropriate.

(Resolution #17 was adopted.)

Resolution #18 — Hospices

(Introduced by Boone County Medical Society)

Resolved, That the House of Delegates of the Missouri State Medical Association directs the Council of the Missouri State Medical Association to effectively endorse efforts in both chambers of the Missouri legislature to secure the passage of appropriate legislation to utilize physician-directed hospice care and also directs MSMA delegates to the American Medical Association to introduce a similar resolution at its meetings and promote and endorse appropriate pending national legislation.

(Resolution #18 was adopted as amended.)

Resolution #19 — Medical Student Involvement

(Introduced by the Commission on Public Affairs)

Resolved, That the MSMA initiates a program of inviting and sponsoring medical students to the Saturday program and banquet of the Annual Session.

(Resolution #19 was adopted as amended.)

Resolution #20 — Medicaid Contract

(Introduced by Richard V. Bradley, M.D., Chairman, MSMA Council)

Resolved, That the MSMA, acting as agent for the participating physicians of Missouri, pursues available legal measures intended to cause the State of Missouri to live up to the full contract, past and present, with regard to Medicaid, and be it further

Resolved, That a copy of this resolution be forwarded to the Governor of the State of Missouri and to officials in the Missouri Department of Social Services and the Division of Family Services and certain legislators in the Missouri General Assembly.

(Substitute Resolution #20 was adopted.)

Resolution #21 — Request to Study Reapportionment of MSMA House of Delegates)

(Introduced by Donald R. Judd, M.D., St. Louis Medical Society

Resolved, That the Council of the MSMA be instructed to formulate a plan that would assure equal representation for all members of the MSMA in the House of Delegates.

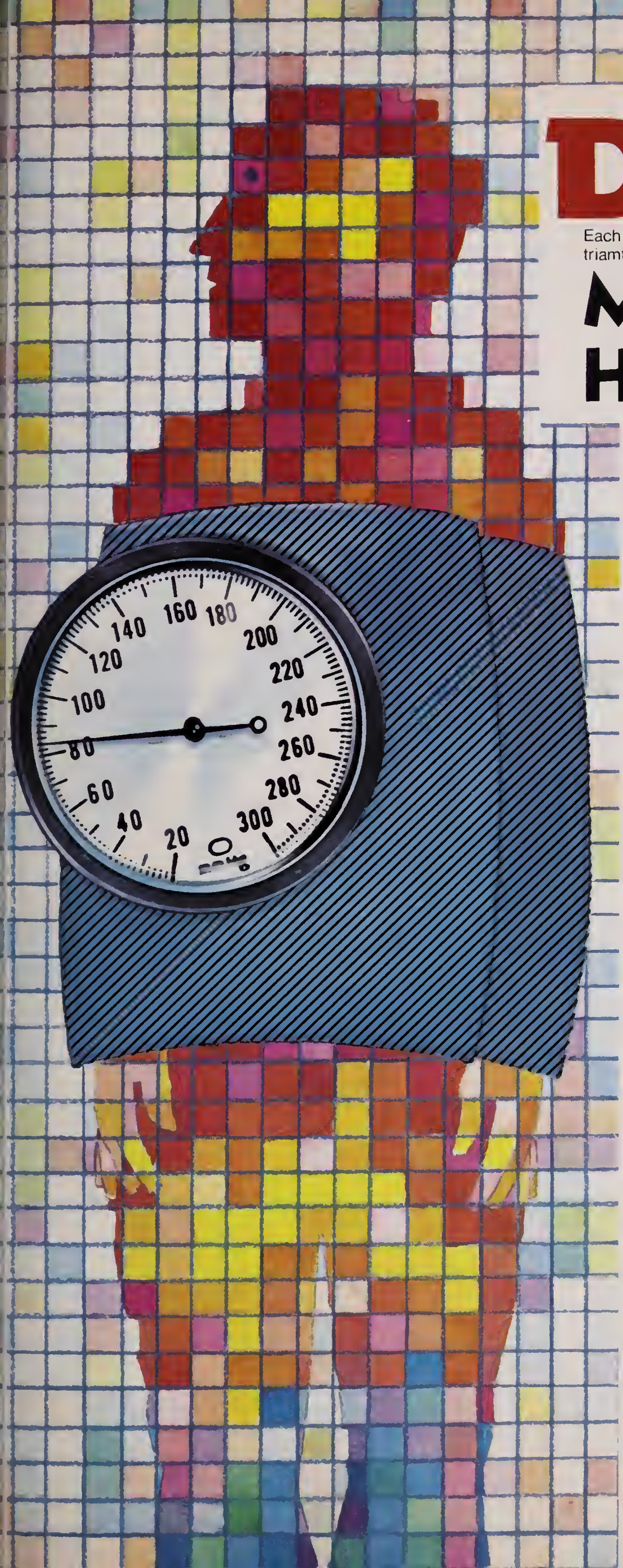
(Resolution #21 was adopted.)

Resolution #22 — Opposition to Change in AMA Policy Regarding Chiropractic

(Introduced by William J. Medlicott, M.D., Delegate from Jackson County)

Resolved, That the House of Delegates of the Missouri State Medical Association urges the Board of Trustees of the American Medical Association to refrain and desist from taking any action which might change or modify the Association's official policy rela-

(Continued on page 104)



Dyazide®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Makes Sense in Hypertension*

Before prescribing, see complete prescribing information in SK&F Co. literature or *PDR*. A brief summary follows:

* Warning
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

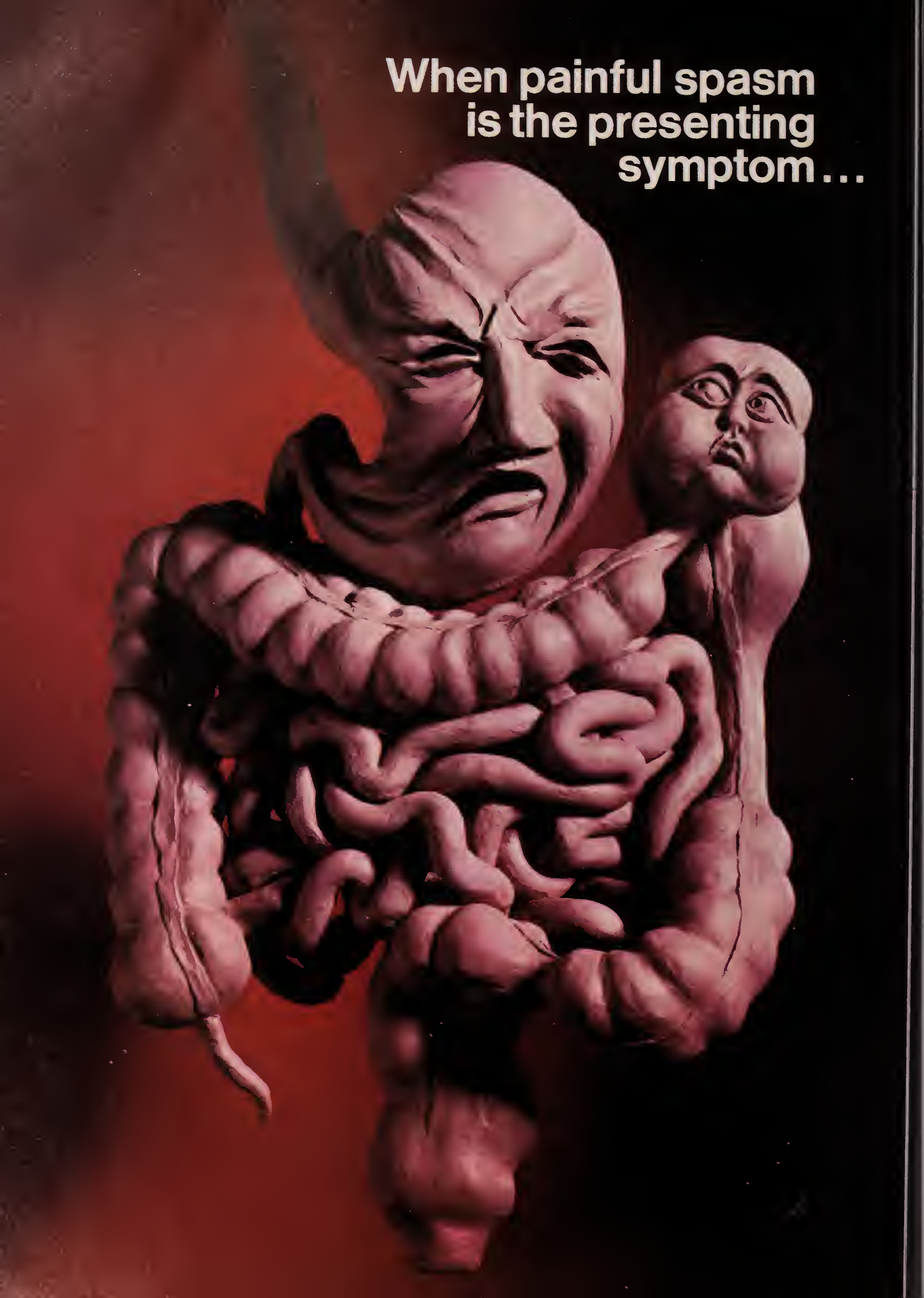
Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K+ frequently; both can cause K+ retention and elevated serum K+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions, nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
a SmithKline company
Carolina, P.R. 00630


When painful spasm
is the presenting
symptom...

. in functional G.I. disorders*

Bentyl®

(dicyclomine hydrochloride USP)

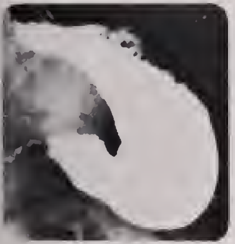
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

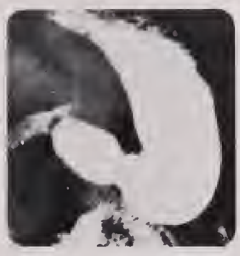
Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

Merrell

8-3497 (Y515A)

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection
AVAILABLE ONLY ON PRESCRIPTION.

Brief Summary
INDICATIONS
For use as adjunctive therapy in the treatment of peptic ulcer.
IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS/ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC/ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders); and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS. Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis, toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS. Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy Use with caution in patients with: autonomic neuropathy, hepatic or renal disease, ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon; hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension; hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.
It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate With overdosage, a curare-like action may occur ADVERSE REACTIONS. Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these Adverse reactions may include xerostomia, urinary hesitancy and retention; blurred vision and tachycardia palpitations, mydriasis, cycloplegia; increased ocular tension; loss of taste, headache; nervousness, drowsiness; weakness, dizziness; insomnia, nausea, vomiting, impotence; suppression of lactation; constipation, bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION Dosage must be adjusted to individual patient's needs
Usual Dosage Bentyl 10 mg, capsule and syrup: *Adults* 1 or 2 capsules or teaspoonfuls syrup three or four times daily *Children* 1 capsule or teaspoonful syrup three or four times daily *Infants* ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water.) Bentyl 20 mg *Adults* 1 tablet three or four times daily Bentyl Injection *Adults* 2 ml (20 mg) every four to six hours intramuscularly only NOT FOR INTRAVENOUS USE MANAGEMENT OF OVERDOSE The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation Treatment should consist of gastric lavage, emetics, and activated charcoal Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used
Product Information as of October, 1976

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati Ohio 45215 U S A

Interim Session

(Continued from page 103)

tive to chiropractic, until the entire matter can be given careful consideration by the House of Delegates of the AMA, and be it further

Resolved, That the House of Delegates of the Missouri State Medical Association instructs its Delegates to the AMA to oppose to the best of their abilities any change or modification in Section 3 of the Principles of Medical Ethics which reads:

> "A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle,"

And *Be It Further Resolved*, That copies of this resolution be forwarded immediately to Officers and Members of the Board of Trustees of the AMA.

(Resolution #22 was adopted.)

Resolution #23 — Health Maintenance Organizations

(Introduced by Francis X. Lieb, M.D. and Cyril Costello, M.D.)

Now, therefore, we herewith endorse and support the passage of legislation in the Missouri General Assembly adopting a reasonable model H.M.O. statute.

(Resolution #23 was referred to the MSMA Council for study and action.)

Resolution #24 — Physician House Calls

(Introduced by Charles R. Lepley, M.D., Delegate from St. Louis)

Resolved, That the Missouri State Medical Association encourages physicians who desire to take a leadership role in the direct supervision of patient care in the home and who wish to personally provide high quality medical care in the home are able to do so, and be it further

Resolved, That this resolution is in no way meant to encourage in any manner obstetrical home deliveries.

(Resolution #24, as amended, was referred to the MSMA Council for further study.)

NEXT INTERIM SESSION

It was voted by the House of Delegates to hold the 1979 Interim Session on November 10-11, 1979 in Columbia.

The St. Louis Heart Association will present an Advanced Cardiac Life Support Provider Course on April 20-21 at the St. Louis Heart Association Building.

The course is accredited by the AMA, the American College of Emergency Physicians and the American Academy of Family Physicians.

The course is taught by American Heart Association certified ACLS Instructors adhering to Advanced Cardiac Life Support Standards of the AHS.

The course fee of $125 includes teaching materials, coffee and doughnuts each morning and lunch on Friday and Saturday.

Early application is imperative. Write to ACLS Provider Course, St. Louis Heart Association, 4643 Lindell Blvd., St. Louis, Mo. 63108.

in Brief

A summary of AMA, medical & health news

American Medical Association / 535 North Dearborn Street / Chicago, Illinois 60610 / Phone (312) 527-1500 / TWX 910-221-0300

THE AMA's 1979 BUDGET is based on expected revenues of $62,525,000 and expected expenses of $55,559,000, with the favorable balance going to the reserves in accordance with 1975 House of Delegates policy. The House reference committee reported that without a dramatic increase in membership the AMA's expenses will exceed income by 1981, owing to inflation. Inflation will cost the AMA $4.5 million in 1979. The reference committee called for new membership recruitment efforts by medical societies and for active involvement in recruitment by each AMA delegate.

LEGISLATIVE ACTIVITIES and other socioeconomic programs grab the headlines, but most of the AMA's spending goes for scientific work. During the 1979 fiscal year, 61.5% of the AMA budget will be spent for specific programs providing scientific information, promoting the effective delivery of care and continuing to improve the quality of care. Other scientific and informational programs will boost this figure to 70%.

IT'S A "SHOCKING and pervasive attack on professionalism, not just the medical profession but all professions," AMA Board Chairman Robert B. Hunter, M.D., said of a ruling by a Federal Trade Commission judge. The ruling charges the AMA, the Connecticut State Medical Society and the New Haven County Medical Association with restraining physician advertising and physician participation in certain health delivery systems. It says the AMA will be "permitted" to set ethical guidelines for members "after first obtaining the permission and approval of the FTC." If necessary, the AMA said, it will appeal the ruling to the Supreme Court. Dr. Hunter said the FTC hearings show that the AMA is opposed only to misleading advertising and has supported the development of a variety of delivery systems in the free market.

AMA AREA MEETINGS, initiated last year to bring important issues before Federation leaders, will be continued in 1979. The Board of Trustees approved a program of four sessions this spring. Invited to attend will be members of the House of Delegates and state medical association and national specialty society presidents, presidents-elect, council chairmen and executive directors. Tentative locations and dates for 1979 meetings are New Orleans, April 1-2; Washington, D.C., April 24-25; Los Angeles, May 15-16 and Chicago, June 4-5.

AN INTERORGANIZATIONAL Ad Hoc Committee on the Cost of Health Care is getting underway. The committee, authorized by the Board of Trustees, is composed of 15 members and will meet quarterly. It will advise the AMA executive vice-president on efforts to implement the recommendations of the National Commission on the Cost of Medical Care that have been approved by the House of Delegates. Of special interest will be the activities within the organizations represented on the committee to complement medicine's own health care cost containment efforts.

THE AMA REJOINED the World Medical Association following the WMA's adoption of new bylaws which include a system of proportional representation. A founding member of the WMA in 1947, the AMA resigned in 1974. It has rejoined effective January 1. WMA membership is limited to national, nongovernmental associations of physicians.

THE AMA EDUCATION and Research Foundation, for the 29th consecutive year, will contribute more than $1 million in unrestricted gifts to medical schools in 1979. However, Hubert A. Ritter, M.D., AMA-ERF president, told the House of Delegates that another Foundation program, the Guaranteed Loan Program for residents and students, is lagging $650,000 from the previous year. "The cost of a medical education is up, the number of students is up and our future colleagues and professional heirs need us now," he said.

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 454-2291
Contact: **Ronald G. Evens, M.D.**

March 3	City-Wide Radiology Conference — Efficacy Studies in Radiology — The Barium Enema
April 9	City-Wide Radiology Conference
May 14	City-Wide Radiology Conference: Radiology of the Temporomandibular Joint

American College of Physicians
Contact: **Thomas W. Burns, M.D., F.A.C.P., University of Missouri, School of Medicine**
Columbia 65201

March 29-31	Missouri Regional Meeting (Columbia)

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: **Erich W. Pollak, M.D., F.A.C.S., Director of Surgical Education**

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds
First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds

Mercy-Baptist Eye Seminars
615 S. New Ballas Rd., St. Louis 63141
Contact: **Richard B. Oglesby, M.D.**

May 13	Eighth Eye Seminar — Contact Lenses: Present and Future

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
Contact: **Loretta Giacoletto**

Feb. 15-16	TB Today (Barnes Hospital Complex)
Feb. 22-24	Use of the Laboratory in Clinical Practice (Barnes Hospital Complex)
March-May	Internal Medicine Review (Weekly, day TBA) (Steinbert Auditorium, The Jewish Hospital)
March 1-2	An Update in Renal Diseases Adult and Pediatric Problems in Renal Disease (Barnes Hospital Complex)
March 29-30	Pediatric Neurology: Recent Advances in Diagnosis (Barnes Hospital Complex)
April 19-20	Recent Advances in the Diagnosis and Treatment of Hyperlipidemias
April 23-24	Developmental Deviations in Children and Adolescents
April 26-27	Sixth Annual Symposium on Obstetrics and Gynecology
May 2-4	Washington University Medical Center Alumni Reunion
May 10-12	Neuromuscular Diseases (Breckenridge Pavilion Inn, 1 South Broadway)
May 31	Newborn Metabolic Problems

Greater Kansas City Radiological Society
Contact: **G. David Dixon, M.D, President-Secretary**
(816) 932-2550

(Afternoon and Evening Sessions)

Feb. 21	Neuroradiology — Use of Metrizamide
March 21	Uroradiology
April 18	Special Procedures

St. John's Mercy Medical Center
615 S. New Ballas Rd., St. Louis 63141
Contact: James G. Blythe, M.D., Chairman, Dept. of Obstetrics and Gynecology

May 10-11	11th Annual Matt Weis Symposium — Surgical Techniques in Obstetrics and Gynecology

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: Alta Bingham

Feb. 17-24	Winter Traveling Medical Education Course (Maui, Hawaii)
March 4-10	Late-Winter Traveling Medical Education Course (Scottsdale, Ariz.)
April 5-7	Perspectives in Medicine
April 20-21	The Long Weekend: Neurology/Renal Diseases
May 3-5	Seminar: Update in Obstetrics and Gynecology
May 17-18	Surgical Problems—Old and New
June 7-8	Symposium: Physical Fitness

University of Kansas College of Health Sciences
Division of Continuing Education
Rainbow at Olathe Blvd., Kansas City, Kan. 66103
(913) 588-7130

Feb. 22-23	Gynecology and Obstetrics in the 80s
March 12-14	Pediatrics
March 15-16	Recent Advances in Therapeutics
March 29-30	Sexuality of the Handicapped
April 2-3	Ophthalmology: Ophthalmic Plastic Surgery
April 6-8	Anesthesiology (Crown Center Hotel, Kansas City)
April 23-24	Noninvasive Cardiac Diagnosis
April 25-26	Family Practice (Radisson-Muehlebach, Kansas City)
April 27	Infectious Diseases (Radisson-Muehlebach, Kansas City)

Missouri Chapter, American College of Surgeons
Box 1268, Columbia 65205
(314) 449-4518

June 22-23	Annual Professional Meeting (Alameda Plaza, Kansas City)

University of Missouri-Columbia
M-175 Medical Center, Columbia 65201
(314) 882-2256
Contact: William Bradshaw, M.D., Director

Feb. 27-28	Nutritional Update
March 14-15	A Family Practice Update Session
April 9-10	25th Annual Urology Seminar (Crown Center Hotel, Kansas City)

St. Joseph Hospital
3rd St. and First Capitol Dr., St. Charles 63301
Contact: Gerald J. Duling, M.D., Medical Director

Feb. 15	Tumor Board
Feb. 22	Tumor Board
Feb. 27	Respiratory Failure
March 1	Tumor Board
March 8	Tumor Board
March 13	Echocardiography: Clinical Applications and Syndromes
March 13	Pathologist's Seminar
March 15	Tumor Board
March 27	Duodenal Fistula
April 5	Tumor Board
April 10	Echocardiography: Clinical Applications and Syndromes
April 10	Pathologist's Seminar

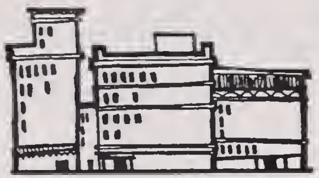
DePaul Community Health Center
12303 DePaul Drive, Bridgeton 63044
Contact: Thomas F. Frawley, M.D., Professional Office Bldg., 12255 DePaul Dr., Suite 865, St. Louis 62044

March 14	A Review of Rheumatology

Give now . . .

to the Missouri State
Medical Foundation
student loan fund.
Your gift is
100 %
tax-deductible!

The Missouri State Medical Foundation is classified by the Internal Revenue Service under 509(a)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.



NEWS From the Medical Schools

ST. LOUIS UNIVERSITY

Hubert A. Ritter, M.D., clinical professor of obstetrics-gynecology, has been named secretary of the National Joint Practice Commission. A 16-member group, the Commission is equally represented by the medical and nursing professions and works toward the improvement of the quality, availability and delivery of health care.

Dr. Ritter

Dr. Ritter is president of the American Medical Association Research Foundation and is also a trustee of the AMA. He is president of the St. Louis Gynecological Society and, in 1978, received the designation of honor member of the St. Louis Medical Society.

"Mode of Action of Autonomic Drugs," a concise and illustrated textbook on the effects of autonomic drugs on the nervous system, is the sixth book authored by *Budh D. Bhagat*, Ph.D., professor of physiology and pharmacology.

Based on lectures given by Dr. Bhagat in medical schools during the past seven years, the book is written primarily for medical students, but it can also prove useful for advanced graduate and nursing students, interns, residents and practitioners.

Dr. Bhagat joined the Medical School in 1968 as an associate professor of physiology and pharmacology. In addition to the autonomic nervous system, his research areas have included the neurotransmitter and the cardiovascular system. The book was published recently by Graceway Publishing Co., Flushing, New York.

Carlos Hirschberg, Ph.D., associate professor of biochemistry, and *James C. Lee*, Ph.D., assistant professor of biochemistry are the recipients of recent awards from the American Cancer Society.

Dr. Hirschberg's Faculty Research Award, in the amount of $130,000, will support his research program titled, "Metabolism and Function of Glycoproteins and Glycolipids," and will be effective from January 1 through Dec. 31, 1983.

Dr. Lee's program is titled "Biophysical Studies of Tubulin-Lagand Interactions." It will be supported by a grant from the Society in the amount of $99,180, which also became effective on January 1 and continues through Dec. 31, 1980.

A $10,000 grant from the National Interagency Council on Smoking and Health will support a program titled "Youth Proposal for a Smokeless Generation," which is being sponsored by the Department of Community Medicine. The object of the program is to create a positive attitude toward nonsmoking in the critical adolescent years by working directly with about 400 sixth and seventh grade students in the St. Louis area.

Chief investigators for the project are *Jerome Cohen*, M.D., associate professor of internal medicine, who as a physician and cardiologist works on many projects aimed toward the prevention of heart disease; and *Rodney M. Coe*, Ph.D., professor of Community Medicine, who is active in research on the social and behavioral agents of health and illness.

Chief investigators for the project are *Jerome Cohen*, M.D., associate professor of internal medicine, and *Rodney M. Coe*, Ph.D., professor of community medicine. As a physician and cardiologist, Dr. Cohen works on many projects aimed toward the prevention of heart disease. Dr. Coe is active in researching social and behavioral agents of health and illness.

The St. Louis University Medical Center is initiating the degree of Master of Science of Community Health for the purpose of preparing individuals for leadership roles in health organization, planning and program development and health education.

Designed to be completed in four semesters, the course will draw on a faculty from medicine, nursing and allied health professions as well as from social work, hospital administration, the behavioral sciences, education and urban affairs.

Applications are now being accepted for the fall of 1979. Student aid is available through loan programs and a limited number of partial tuition scholarships offered by the graduate school.

WASHINGTON UNIVERSITY

The School of Medicine has received a gift of $150,000 to establish an endowed scholarship fund in honor of the late *Albert F. Koetter*, M.D.

The contribution was made by Dr. Koetter's daughter, *Mrs. Stella Koetter Darrow*, who received a bachelor of arts degree from Washington University in 1931.

Dr. Koetter, who died in 1921, was chief of the Medical School's Otology Clinic from 1916 to 1920. He received his medical degree from the old Missouri Medical College in 1892, which was shortly before that institution merged with Washington University's school of medicine.

The gift will provide at least one full tuition scholarship annually for a student in need of financial support. This person must have demonstrated academic ability and show outstanding promise in the field of medicine. The awards will be called the Albert F. Koetter, M.D. Scholarships and will provide support until the student has completed his or her medical education in good standing.

Mrs. Darrow has provided several gifts to Washington University in memory of other members of her family, including her sister, Wilma Koetter, for whom an annual lecture is named.

UNIVERSITY OF MISSOURI-KANSAS CITY

Harry S. Jonas, M.D., dean of the School of Medicine, has announced the appointment of two faculty members to his executive staff. *Dr. Glenn H. Eberhart* will be an assistant dean and chairman of the Council on Evaluation and *Dr. Katherine Wilson Smith* will be an assistant dean and chairman of the Council on Selection.

Dr. Eberhart has carried a joint appointment with the School of Pharmacy and School of Medicine since 1971. He has been an elected member of the Council on Evaluation since 1971, serving as chairman since the former chairman, Dr. Jonas, was appointed dean.

Dr. Smith, director of the Adolescent Clinic at Children's Mercy Hospital, has held a faculty appointment since the early days of the School. She has served as a Year-2 docent as well as an instructor for the Year 2 pediatric sequence and the pediatric clerkship.

Jafar Amini, M.D., has joined the School's major teaching affiliate, the Truman Medical Center, as chairman of the Department of Radiology. He was formerly chief of Radiology Service, Nuclear Medicine; head of Angiography and Special Procedures; and chief, Section of Ultrasound at the Veterans Administration Medical Center in Kansas City.

The University and Truman Medical Center hosted a recent visit by *Dr. Claude Organ, Jr.*, chairman of the Department of Surgery at Creighton University. He spoke to the Kansas City Surgical Society on "Owen, Mandel, Dubois and the Parathyroids, 1979" and presented vignettes about colorectal cancer. He also participated in surgical rounds with students and residents at the Truman Medical Center and in grand rounds at Children's Mercy Hospital, where he presented "Genetics and Its Relationship to Cancer."

Dr. Organ's visit was sponsored by the Ralph Ringo Coffey Fund for Surgical Education. The fund was started by the surgical residents of the old Kansas City General Hospital and Medical Center (now Truman Medical Center) in recognition of Dr. Coffey's outstanding teaching efforts from 1950-1954.

In Memoriam

Palmer R. Bowdish, M.D., 604 E. Yerby, Marshall 65340; a graduate of Albany Medical College, 1904; member of Saline County Medical Society; age 97; died Nov. 13, 1978.

Herbert Lee Hoover, M.D., 1330 E. Walnut, Springfield 65802; a graduate of Washington University Medical School, 1931; member of Greene County Medical Society; age 72; died Dec. 9, 1978.

Luther John Ferguson, M.D., 12 Ridgeland Rd., St. Joseph 64501; a graduate of Ensworth Medical College, 1911; member of Buchanan County Medical Society; age 90; died Dec. 10, 1978.

Charles F. Grabske, M.D., 1224 W. 36th, Independence 64055; a graduate of the University of Kansas, 1927; member of Jackson County Medical Society; age 86; died Dec. 10, 1978.

New Members

Gary Edwin Baker, M.D., Department of Child Health, University of Missouri, Columbia 65201, has become a member of Boone County Medical Society. Dr. Baker is a native of Wheatland, Wyo., received his preliminary education at the University of Wyoming and his M.D. degree at Washington University in 1968. He specializes in pediatrics.

Herbert Charles Bastow, M.D., 1502 E. Broadway, Columbia 65201, has become a member of Boone County Medical Society. Dr. Bastow is a native of Creston, Iowa, received his preliminary education at the University of Iowa and his M.D. degree at the University of Iowa in 1972. He specializes in urology.

Habib Asad Bhutta, M.D., 815 East Main, Flat River 63601, has become a member of Mineral Area County Medical Society. Dr. Bhutta is a native of India, received his preliminary education at Islamia College and his M.D. degree at Nishtar Medical College in 1968. He specializes in general surgery.

Rutillo M. Chaves, M.D., 1410 Bobolink Place, St. Louis 63144, has become a member of St. Louis Metropolitation Medical Society. Dr. Chaves is a native of the Philippines. He received his M.D. degree at the University of Santo Tomas in 1950. He specializes in obstetrics and gynecology.

Sandra L. H. Davenport, M.D., University of Missouri Medical Center, 807 Stadium Blvd., Columbia 65201, has become a member of Boone County Medical Society. Dr. Davenport is a native of Grand Rapids, Minn., received her preliminary education at Columbia University and her M.D. degree at McGill University in 1968. She specializes in pediatrics.

Justin H. Durel, M.D., 1325 South Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Durel is a native of Thibodaux, La., received his preliminary education at Spring Hill College and his M.D. degree at the University of Alabama in 1974. He specializes in obstetrics and gynecology.

N. Ghosh, M.D., 114 N. Taylor Ave., St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Ghosh is a native of Burma, received her preliminary education at St. Joseph's Convent and her M.D. degree from the Institute of Medicine in Mandalay, Burma, in 1965. She specializes in cardiology.

Robert Hellman, M.D., Department of Anesthesiology, Barnes Hospital, 4989 Barnes Hospital Plaza, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Hellman is a native of Elizabeth, N. J., received his preliminary education at Yeshiva University and his M.D. degree at N. J. College of Medicine and Dentistry in 1973. He specializes in anesthesiology.

Timothy Holekamp, M.D., 3205 Lansing Ave., Columbia 65201, has become a member of Boone County Medical Society. Dr. Holekamp is a native of St. Louis, received his preliminary education at Amherst College and his M.D. degree at Washington University in 1972. He specializes in ophthalmology.

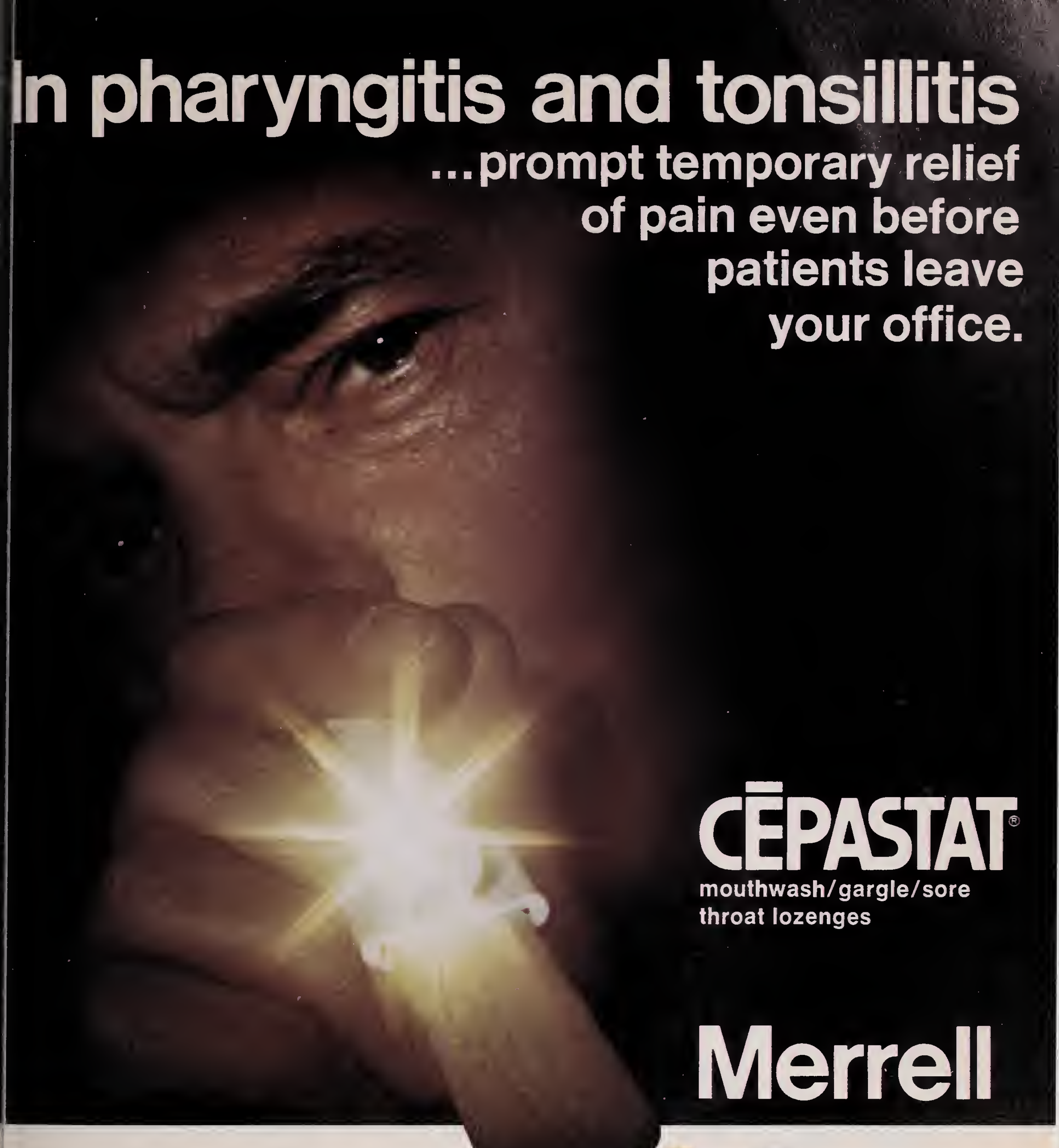
David Cromwell Jenkins, M.D., Community Blood Center, 4040 Main, Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Jenkins is a native of Manchester, England, received his preliminary education at Clifton College and his M.D. degree at London Hospital Medical College in 1953. He specializes in clinical pathology.

Robert Lamar Lambright, M.D., Suite 204-206, 310 W. 47th, Kansas City 64112, has become a member of Jackson County Medical Society. Dr. Lambright is a native of Louisville, Ky., received his preliminary education at the University of Mississippi and his M.D. degree at Vanderbilt University in 1950. He specializes in psychiatry.

Steven Lauter, M.D., 777 S. New Ballas, Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Lauter is a native of Detroit, Mich., received his preliminary education at Wayne State University and his M.D. degree at Wayne State University in 1971. He specializes in rheumatology and internal medicine.

Leland M. Laycob, M.D., 522 N. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Laycob is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at the University of Missouri in 1968. He specializes in pediatrics.

(Continued on page 111)



In pharyngitis and tonsillitis

...prompt temporary relief of pain even before patients leave your office.

CĒPASTAT®
mouthwash/gargle/sore throat lozenges

Merrell

ven Anesthetic ectiveness

ying the throat with CĒPASTAT s soothing relief within minutes. patients will appreciate this relief waiting for therapeutic measures ke hold. The well-established thetic effects of CĒPASTAT pro- soothing temporary anesthesia to rritated or inflamed oropharyngeal osa.

PASTAT in your atment room . . .

d as a spray, CĒPASTAT is more to deliver the most relief to the ful area of the throat.

Suit the product to the patient . . .

The liquid is best for use at home as a spray or gargle. Lozenges are ideal for patients on the go.

A recommendation is best . . .

It costs less. Keeps the emphasis where you want it . . . on more important counter-measures — your prescription for anti-infectives, for example.

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215

CĒPASTAT
mouthwash gargle
anesthetic antiseptic
CĒPASTAT
sore throat lozenges
anesthetic antiseptic cooling
Merrell

relief of minor sore throat when patients want it . . .

stat

When the indications surface…
Net wt 1 oz
Net wt 1/2 oz
Net wt 1/32 oz
(approx)
NDC-0081-07
Net wt 1 oz
NEOSPORIN
OINTMENT
POLYMYXIN B-BACITRACIN-
TOPICAL ANTIBACTE
Net wt ½ oz
NEOSPORI
OINTMENT
Net wt. 1/32 oz (approx.)
NEOSPORIN
POLYMYXIN B-BACI
TOPICAL ANT

NEOSPORIN® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base), special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa; primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis); traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Dwight A. Lee, M.D., Department of E.N.T., arnes Hospital, St. Louis 63110, has become a ember of St. Louis Metropolitan Medical Soci-ty. Dr. Lee is a native of Columbia. He received is M.D. degree at Tulane Medical School in 973. He specializes in otorhinolaryngology.

Joseph Ting Tak Lee, M.D., 510 S. Kings-ighway, St. Louis 63110, has become a member f St. Louis Metropolitan Medical Society. Dr. ee is a native of China, received his preliminary lucation at Chinese University of Hong Kong nd his M.D. degree at Washington University in 973. He specializes in radiology.

Robin R. MacDonald, M.D., 352 Rockhill ledical Bldg., 6700 Troost, Kansas City 64131, as become a member of Jackson County Medical ociety. Dr. MacDonald is a native of South Af-ca, received his preliminary education at the niversity of Cape Town and his M.D. degree at e University of Cape Town in 1958. He ecializes in diagnostic radiology.

Thomas E. Mais, M.D., St. Luke's Hospital, 4th and Wornall Rd., Kansas City 64111, has ecome a member of Jackson County Medical ociety. Dr. Mais is a native of Kansas City, re-eived his preliminary education at California Vestern University and his M.D. degree at the niversity of Kansas in 1972. He specializes in adiology.

Patrick F. Majors, M.D., 950 Francis Pl., St. ouis 63105, has become a member of St. Louis letropolitan Medical Society. Dr. Majors is a ative of New Rockford, N. D., received his pre-minary education at the University of North akota and his M.D. degree at St. Louis Univer-ty in 1975. He specializes in internal medicine.

Narayanagoud Memula, M.D., 115 Business oop 70 West, Columbia 65201, has become a ember of Boone County Medical Society. Dr. lemula is a native of India. He received his M.D. egree at Osmania Medical College in 1973. He pecializes in radiation oncology.

Jeffrey J. Modin, M.D., 11745 Olive Street d., St. Louis 63141, has become a member of St. ouis Metropolitan Medical Society. Dr. Modin a native of New York. He received his M.D. egree at the Chicago Medical School in 1966. He pecializes in child neurology.

J. Scott Morrison, M.D., 424 Nichols Rd., ansas City 64112, has become a member of ackson County Medical Society. Dr. Morrison is a native of Prague, Okla., received his preliminary education at the University of Oklahoma and his M.D. degree at the University of Oklahoma in 1962. He specializes in psychiatry.

Neal Neuman, M.D., 456 N. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Neuman is a native of St. Louis, received his preliminary education at the University of Missouri and his M.D. degree at St. Louis University in 1971. He specializes in urology.

George R. Nicholis, M.D., 373 W. 101st Terrace, Kansas City 64114, has become a member of Jackson County Medical Society. Dr. Nicholis is a native of Lynn, Mass., received his preliminary education at Bowdoin College and his M.D. degree at the Chicago Medical School in 1972. He specializes in pediatrics.

Dwight K. Oxley, M.D., 5105 Somerset Dr., Shawnee Mission, Kan. 66207, has become a member of Jackson County Medical Society. Dr. Oxley is a native of Wichita, Kan., received his preliminary education at Harvard University and his M.D. degree at Kansas University in 1962. He

CODING

the procedures you report
on Blue Shield claims
according to the BSA
Uniform Code in your
Physician's Office Manual
will help speed processing.

Saint Louis
Blue Shield
A COMMUNITY SERVICE
®

specializes in pathology (anatomic and clinical) and nuclear medicine.

Rudraiah Raja-Sekhar, M.D., 1325 South Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Raja-Sekhar is a native of India, received his preliminary education at Arts and Science College and his M.D. degree at Bangalore Medical College in 1966. He specializes in anesthesiology.

James Edward Remkus, M.D., 6724 Troost, Kansas City 65131, has become a member of Jackson County Medical Society. Dr. Remkus is a native of East St. Louis, received his preliminary education at Westminster College and his M.D. degree at the University of Missouri in 1972. He specializes in internal medicine and cardiovascular diseases.

Fabio Rodriguez, M.D., Mallinckrodt Institute of Radiology, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Rodriguez is a native of the Dominican Republic. He received his M.D. degree at Facultad De Medicina in 1971. He specializes in diagnostic radiology.

Robert E. Ryan, Jr., M.D., 621 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Ryan is a native of Rochester, Minn., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1973. He specializes in otorhinolarynology and head and neck surgery.

Dasa Satyam, M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Satyam is a native of India, received his preliminary education at MGM Higher Sec. School and his M.D. degree from Gulbarga Medical College in 1972. He specializes in anesthesiology.

Sally Schneider, M.D., 621 South New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Schneider is a native of Friend, Neb., received her preliminary education at the University of Nebraska and her M.D. degree at the University of Nebraska in 1968. She specializes in anesthesiology.

Paul N. Selvadurai, M.D., 10 North Kingshighway #9, St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Selvadurai is a native of Ceylon, received his preliminary education at S. Thomas College and his M.D. degree at the University of Ceylon in 1969. He specializes in internal medicine and pulmonary diseases.

M. Yusuf Siddiqui, M.D., 2601 North Whittier, St. Louis 63113, has become a member of St. Louis Metropolitan Medical Society. Dr. Siddiqui is a native of India. He received his M.D. degree from M. P. Shah Medical College in 1967. He specializes in general surgery.

Jawed H. Siddiqui, M.D., 6651 Chippewa, St. Louis 63109, has become a member of St. Louis Metropolitan Medical Society. Dr. Siddiqui is a native of India, received his preliminary education at Government College and his M.D. degree from Liaquat Medical College in 1971. He specializes in internal medicine and cardiology.

S. Sirisuwanangkura, M.D., 3466 Bridgeland Dr., Bridgeton 63044, has become a member of St. Louis Metropolitan Medical Society. Dr. Sirisuwanangkura is a native of Thailand, received his preliminary education at Mahidol University and his M.D. degree at Ramathibodi Medical School in 1971. He specializes in pulmonary diseases.

Pete D. Stavrides, M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St Louis Metropolitan Medical Society. Dr. Stavrides is a native of Dayton, Ohio, received his preliminary education at Ohio State University and his M.D. degree at St. Louis University in 1974. He specializes in orthopedic surgery.

N. Vakassi, M.D., 716 Hanley Industria Court, St. Louis 63144, has become a member o St. Louis Metropolitan Medical Society. Dr. Vakassi is a native of India, received her preliminary education at Nazareth College and her M.D. degree at Liaquat Medical College in 1968. She specializes in pathology.

Joseph Williams, M.D., 950 Francis Place, St Louis 63105, has become a member of St. Loui Metropolitan Medical Society. Dr. Williams is a native of St. Louis, received his preliminary education at St. Benedict's College and his M.D degree at St. Louis University in 1969. He specializes in orthopedic surgery.

INDEX TO ADVERTISERS

They Help Make MISSOURI MEDICINE *Possible*

eltone Electronics ... 64
urroughs Wellcome ... Insert (110-111)

oetz-Niemer Company ... 97

anley Medical Equipment Co. ... 113
empel Financial Corporation ... 65

red S. James & Co. of Missouri, Inc. ... 98

Eli Lilly & Company ... 76

ead Johnson Pharmaceutical Division ... Insert (94-95)
edical Defense Associates ... 75
edical Protective Company ... 96

Merck Sharp & Dohme ... Insert (62-63)
Merrell-National Laboratories ... 62, Insert (62-63), Insert (102-103), 103, 104, Insert (110-111)
MOMEDICO ... 58
Munns Medical Supply ... 70

Pfizer Pharmaceuticals ... 63

Roche Laboratories ... 59, 115, 116

Saint Louis Blue Shield ... 111
Smith Kline and French ... Insert (102-103)
St. Louis Surgical Society Seminar ... 62

The Upjohn Company ... Insert (62-63)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

FFICE EQUIPMENT FOR SALE — Entire office contents available immediately. Pediatrician retiring. For inforation, call (314) 893-4485 or write to J. S. Sennott, M.D., 407 Southwest Boulevard, Jefferson City, MO 65101.

AVAILABLE FOR LOCUM TENENS — In Missouri during March and April. Board certified in family practice and allergy. Seventeen years private practice experience. Write to CA-BOX 451, Missouri State Medical Association, P.O. Box 1028, Jefferson City, Mo. 65102.

EMERGENCY MEDICINE PHYSICIAN — 500-bed St. Louis teaching hospital; comfortable patient volume, excellent physician backup. 42-hour/week; minimum guarantee plus profit sharing. Excellent Annual Income plus benefits. Contact Jim Cooper at (314) 878-2280 for details.

FAMILY PRACTICE — Solo Board Certified family practitioner is seeking a family practice associate in growing community 6 miles north of Kansas City International Airport. Contact, Carl M. Myers, M.D., Platte Medical Clinic, Platte City, Mo. 64079. (816) 431-2200.

HANLEY 14 x 17 Vertical X-Ray and Medical Record Cabinets are used in most hospitals in America.
Special new ultrasonic, $399. Physio Therapy—Complete Examining and Reception Room Furniture—Traction Equipment—Hospital Beds—Wheelchairs—Jacuzzi Whirlpools—Oxygen. SOLD & RENTED.

HANLEY MEDICAL EQUIPMENT
5614 S. Grand St. Louis, Mo. 63111 314-351-3359

Scientific Sessions Important to Every Physician!

121st MSMA ANNUAL SESSION

April 19-22, 1979 St. Louis Chase-Park Plaza

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

The Buchanan County Medical Society met at the Missouri Methodist Hospital on December 7 at 8 PM. Dr. Gregg Thompson, director of the cancer clinic gave a complete report on the work of the clinic since it was established in May. The following officers were elected for 1939: Dr. F. X. Hartigan, president; Dr. T. L. Howden, vice-president; Dr. O. Earl Whitsell, secretary; and Dr. J. M. Bell, treasurer.

Bronze plaques dedicated to the memory of Dr. Ellis Fischel, Dr. Harvey G. Mudd and Dr. William H. Mook were unveiled at the annual meeting of the Barnard Free Skin and Cancer Hospital in St. Louis on January 23.

The Northwest Regional Conference will meet in Chicago on February 12. Dr. Carl F. Vohs, St. Louis, is president of the Conference. Dr. Major G. Seelig, St. Louis, will discuss "A State-wide Hospitalization Plan for the Low Income Group."

Dr. Meyer Wiener, St. Louis, was the guest of honor at the annual meeting of the St. Louis Society for the Blind. The meeting was held in St. Louis on December 5.

TWENTY-FIVE YEARS AGO

According to Vice-President Leslie Cowan, bids on the $13,5 million medical center for the University of Missouri Medical School were opened early in December.

A new dean of the Washington University School of Medicine, but one with a familiar name, has been announced by Chancellor Arthur H. Compton, effective March 15. Carl V. Moore, M.D., professor of medicine since 1945, replaces Robert A. Moore, M.D., who is now in Pittsburgh.

Dan Yancey, M.D. and C. B. Meyer, M.D. of Springfield were widely quoted in an AP release when they operated on Mickey Mantle, New York center fielder.

The Kansas City Times carried a feature story about the new radioactive study laboratory at Menorah Hospital in that city. The "hot" lab i under the direction of Leonard Walker, Ph.D.

The most recent book on emergency surger edited by Bernard J. Ficarra contains a section o acute infections and traumatic injuries of the han which was written by Wallace H. Graham, M.D of Kansas City.

TEN YEARS AGO

In his report to the House of Delegates at th 22nd Clinical Convention held in Miami Beach o Dec. 1-4, 1968, Dwight L. Wilbur, president o the American Medical Association, stated tha "We are immersed in an epoch of change." H added, "We cannot emerge from it as respecte leaders unless we guide the course of change. . . Our guidance in helping change all elements o society that affect the people's health in an orderly, balanced sequence is the price of our continued esteem as a profession and an organization."

The MSMA was officially represented at th convention by AMA delegates Drs. Stanley S Peterson, Arthur W. Neilson, J. Loren Washbur and Hector W. Benoit, Jr. and alternate delegate Robert W. Kelley, Hugh E. Stephenson, Jr. an James C. Sisk; President David N. Kerr; an President-Elect Doyle C. McCraw.

Two physicians who are pioneers in the hear transplant field in the U. S. will be featured o the program for the 111th Annual Meeting of th MSMA scheduled for March 20-23, 1969 at th Chase-Park Plaza Hotel in St. Louis. Dr. Dento A. Cooley and Dr. Robert DeWitt Leachman o Houston, Tex. will participate in the program o Friday morning, March 21.

John T. Crowe, M.D., Cape Girardeau, wa elected president-elect of the Missouri Academ of General Practice during the association's 20t Annual Scientific Assembly on November 16-1 at the Chase Park-Plaza Hotel in St. Louis. Dr Crowe is a member of the Cape Girardeau Count Medical Society for which he served as secreta in 1950-51.

efore prescribing, please consult complete product information, a ummary of which follows:

e effectiveness of Valium (diazepam) in long-term use, that is, more than months, has not been assessed by systematic clinical studies. The ysician should periodically reassess the usefulness of the drug for the dividual patient.

ontraindications: Tablets in children under 6 months of age; known persensitivity; acute narrow angle glaucoma, may be used in patients th open angle glaucoma who are receiving appropriate therapy.

arnings: As with most CNS-acting drugs, caution against hazardous ocupations requiring complete mental alertness (e.*g*., operating machinery, iving). Withdrawal symptoms (similar to those with barbiturates, alcohol) ave occurred following abrupt discontinuance (convulsions, tremor, dominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of edisposition to habituation/dependence.

> ***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

RAL Advise patients against simultaneous ingestion of alcohol and other NS depressants.

ot of value in treatment of psychotic patients; should not be employed in u of appropriate treatment. When using oral form adjunctively in convulve disorders, possibility of increase in frequency and/or severity of grand al seizures may require increase in dosage of standard anticonvulsant edication; abrupt withdrawal in such cases may be associated with temrary increase in frequency and/or severity of seizures.

JECTABLE *To reduce the possibility of venous thrombosis, phlebitis, local itation, swelling, and, rarely, vascular impairment when used I.V.: inject owly, taking at least one minute for each 5 mg (1 ml) given, do not use nall veins,* i.e., *dorsum of hand or wrist, use extreme care to avoid intraterial administration or extravasation. Do not mix or dilute Valium with her solutions or drugs in syringe or infusion flask. If it is not feasible to lminister Valium directly I.V., it may be injected slowly through the infusion bing* as close as *possible to the vein insertion.*

dminister with extreme care to elderly, very ill, those with limited pulmoary reserve because of possibility of apnea and/or cardiac arrest, conmitant use of barbiturates, alcohol or other CNS depressants increases epression with increased risk of apnea; have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosge at least 1/3, administer in small increments. Should not be administered patients in shock, coma, acute alcoholic intoxication with depression of al signs.

as precipitated tonic status epilepticus in patients treated for petit mal atus or petit mal variant status.

ithdrawal symptoms (similar to those with barbiturates, alcohol) have ocurred following abrupt discontinuance (convulsions, tremor, abdominal/ uscle cramps, vomiting, sweating). Keep addiction-prone individuals nder careful surveillance because of predisposition to habituation/ ependence. Not recommended for OB use.

ficacy/safety not established in neonates (age 30 days or less); pronged CNS depression observed. In children, give slowly (up to 0.25 g/kg over 3 minutes) to avoid apnea or prolonged somnolence; can be peated after 15 to 30 minutes. If no relief after third administration, opropriate adjunctive therapy is recommended.

recautions: If combined with other psychotropics or anticonvulsants, arefully consider individual pharmacologic effects—particularly with known ompounds which may potentiate action of Valium (diazepam), *i.e.*, enothiazines, narcotics, barbiturates, MAO inhibitors and antidepresants. Protective measures indicated in highly anxious patients with acompanying depression who may have suicidal tendencies. Observe usual ecautions in impaired hepatic function; avoid accumulation in patients ith compromised kidney function. Limit oral dosage to smallest effective mount in elderly and debilitated to preclude ataxia or oversedation (inially 2 to 2½ mg once or twice daily, increasing gradually as needed or lerated).

INJECTABLE Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, have been observed in patients during and after Valium (diazepam) therapy and are of no known significance.

INJECTABLE Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

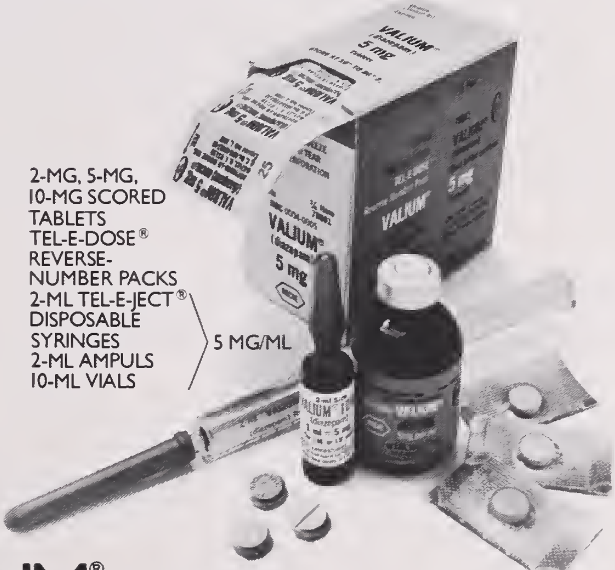
In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension, caffeine and sodium benzoate for CNS-depressive effects. Dialysis is of limited value.

Supplied: Tablets, 2 mg, 5 mg and 10 mg, bottles of 100 and 500; Tel-E-Dose® (unit dose) packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Ampuls, 2 ml, boxes of 10. Vials, 10 ml, boxes of 1; Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

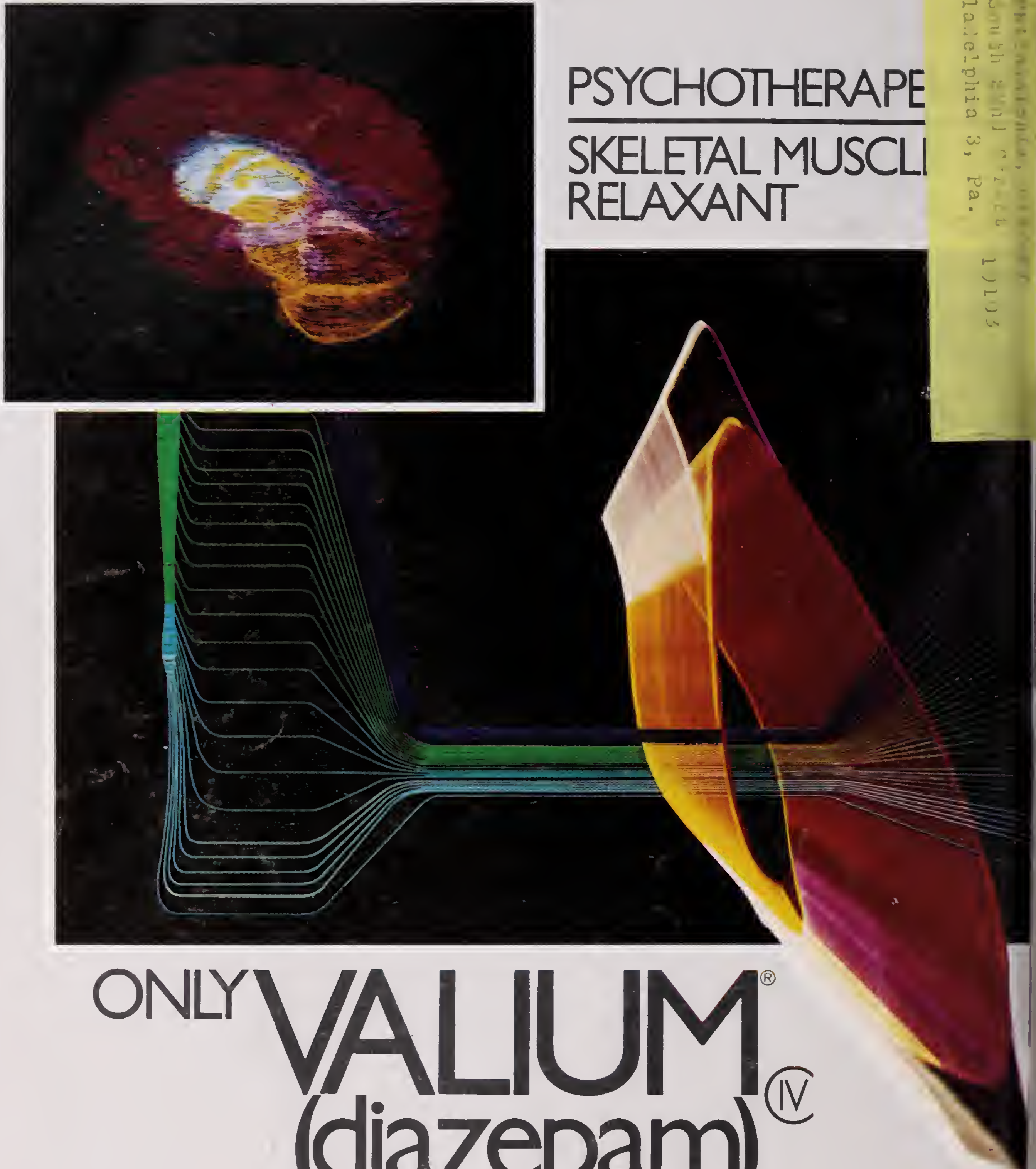
ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



2-MG, 5-MG, 10-MG SCORED TABLETS
TEL-E-DOSE® REVERSE-NUMBER PACKS
2-ML TEL-E-JECT® DISPOSABLE SYRINGES
2-ML AMPULS
10-ML VIALS
5 MG/ML
VALIUM® (diazepam) 5 mg
VALIUM®

ONLY VALIUM® (diazepam)
GIVES YOU THIS CHOICE OF DOSAGE
FORMS AND FLEXIBILITY



PSYCHOTHERAPE

SKELETAL MUSCL
RELAXANT

ONLY VALIUM®
(diazepam) Ⓘⓥ
HAS THESE TWO
DISTINCT EFFECTS

Please see preceding page for a summary of product information. ROCH

of Philadelphia, [illegible]
19 South 22nd Street 19103
Philadelphia 3, Pa.

Missouri Medicine

Vol. 76, No. 3 (ISSN 0026-6620) MARCH, 1979

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
APR 9 - 1979

Special!

A Pharmacist's Personal Experiences With Generic Drugs

MDS

Annual Session Program, Delegates and Exhibitors

Update on Stapled Bowel Anastomosis

Auxiliary Convention Program and Benefit Auction

Infantile Botulism in Missouri

Leptospirosis and Limb Gangrene

MISSOURI STATE MEDICAL ASSOCIATION

Contents Page 123

MOMEDICO

YOUR PROFESSIONAL LIABILITY
INSURANCE COMPANY

prescription
for protection!

Who knows the needs of a physician better than his peers? That's why MOMEDICO was formed **by** doctors **for** doctors.

MOMEDICO is owned by the Missouri State Medical Association and is a **stock** insurance company licensed and regulated under the laws applicable to insurance companies in the State of Missouri. MOMEDICO was formed to provide physician professional liability insurance to MSMA members at a reasonable price.

missouri medical insurance company
100 North Broadway
St. Louis, Missouri 63102

314-241-4774

COMPARE

MOMEDICO

Writes
- occurrence form

Professional liability insurance

Is adequately capitalized and
- financially strong

Purchase all
- domestic reinsurance

for protection

Is a
- stock insurance company domiciled in Missouri

Is
- not assessable

Has
- no deductible for claims

Provides
- adequate limits

Offers
- premises liability

Includes
- personal injury coverage
- May refund premiums with favorable underwriting experience

Editorial and Business Office, P O Box 1028, 113 Madison St. Jefferson City Mo. 65102 Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid a Jefferson City, Missouri and at additional mailing offices MISSOURI MEDICINE Publication No. 355380 is published monthly, except semimonthly in August, by the Missouri State Medical Association 113 Madison Street, Jefferson City, Missouri 65102 Subscription Price $15.00 Per Year. Medical Students, Interns and Residents, $7.50 Per Year Printed by The Ovid Bell Press, Inc., Fulton Missouri

MSMA

NEWS ROUND - UP

March, 1979

New schedule for Annual Session

The schedule for the 1979 Annual Session of the Missouri State Medical Association, April 19-22, at the Chase-Park Plaza Hotel in St. Louis, will be different from previous years.

The schedule has been changed to allow more time for Reference Committee hearings and also to allow delegates to attend more than one Reference Committee. The Opening Session of the House of Delegates will begin at 10:30 a.m., Thursday, April 19. Reference Committee meetings will begin about 1 p.m. and the times will be staggered. The rest of the session will remain as before, with the second meeting of the House beginning at 4 p.m. on Friday and the final session at 7:30 a.m., Sunday.

Another new concept will be tried at this year's Annual Session. A "consent calendar" system will be incorporated into the present Reference Committee structure, so that all topics which are non-controversial can be voted on in groups.

Continued on Next Page

Schedule of Events

Thursday, April 19

8:00 a.m.	Registration of Delegates, **Regency Room.**
10:30 a.m.	House of Delegates Meeting, Opening Session, **Khorassan Room.**
1:00 p.m.	Reference Committee Meetings.
7:00 p.m.	MSMA Auxiliary Benefit Auction for AMA-ERF/MSMF, **Chase Club.**

Friday, April 20

7:00 a.m.	MSMA Jogging Event, **Forest Park.**
8:00 a.m.	Registration, **Regency Room.**
8:00 a.m.	Exhibits Open.
9:00 a.m.	General Session, **Chase Club** Introduction: *John N. Martin, M.D.*, St. Joseph, MSMA President Speakers: *Hoyt D. Gardner, M.D.,* Louisville, Ky., President-Elect, American Medical Association and U.S. Representative *Harold L. Volkmer.*
9:00 a.m.	Scientific Sessions Begin.
3:30 p.m.	Missouri State Medical Foundation Board Meeting, **Khorassan Room.**
4:00 p.m.	House of Delegates, Second Session, **Khorassan Room.**
6:00 p.m.	Reference Committee Meetings.

Saturday, April 21

7:30 a.m.	MSMA Auxiliary Public Affairs Breakfast, **Chase Club** Speaker: *George T. Wilkins, M.D.,* Granite City, Ill., Board Member, AMPAC.
8:00 a.m.	Registration, **Regency Room.**
8:00 a.m.	Exhibits Open.
9:00 a.m.	Scientific Sessions Begin.
9:00 a.m.	"Discuss the Issues with Your AMA Delegates," **Lacquer Room.**
12:30 p.m.	Fifty-Year Club Luncheon, **Chippendale Room.**
6:30 p.m.	Social Hour for those attending Annual Banquet, **Khorassan Room.**
7:15 p.m.	Annual Banquet in Honor of Past Presidents, **Khorassan Room.**

Sunday, April 22

7:30 a.m.	House of Delegates Breakfast and Final Session, **Khorassan Room.**

Dr. Hoyt Gardner

Annual Session

Continued

A special 3-mile Jog in Forest Park will take place at 7 a.m., Friday, April 20. The medical students from St. Louis University and Washington University Schools of Medicine have been invited to join the physicians in this run for better health.

Several nationally known spokesman for medicine will be featured this year. Hoyt D. Gardner, M.D., president-elect of the American Medical Association, and U.S. Representative Harold L. Volkmer, representing Missouri's Ninth District, will address the Opening General Session of the convention on Friday. At the MSMA Auxiliary Public Affairs Breakfast on Saturday morning, George T. Wilkins, M.D., an AMPAC Board Member, will speak.

This year the MSMA Auxiliary is also sponsoring the first annual Benefit Auction for AMA-ERF/MSMF, which will be held at 7 p.m., Thursday, April 19. A cash bar will open at 6:30 p.m.

The items to be auctioned off will be donated by members of the MSMA and the Auxiliary, and "The Singing Doctors" of Springfield will serve as auctioneers. All MSMA members, MSMA Auxiliary members and guests are invited to attend the auction.

An excellent scientific session is planned for Annual Session. The continuing medical education program will offer 36 scientific sessions, sponsored by 19 medical specialties and two voluntary health organizations. The scientific program is approved for 13-1/2 Category I CME credit by the MSMA. Also the program is acceptable for three Prescribed and 10-1/2 Elective hours by the American Academy of Family Physicians.

There will also be 44 Technical Exhibits. Physicians who register at the exhibit booths will be eligible to win attendance prizes.

Again this year, Missouri physicians will have the opportunity to talk to their AMA delegates and alternates in an open forum-type discussion. The delegates will be available at 9 a.m. on Saturday.

The annual Past Presidents Banquet will be held Saturday evening. Tickets for this Banquet, the 50-Year Club Luncheon and the Breakfast Meeting of the House of Delegates will be available at the MSMA Registration Desk.

Join your fellow physicians in a 3-mile run for fun during Annual Session. The jog will begin at 7 a.m., Friday, April 20, in Forest Park.

Missouri Supreme Court decides professional liability cases

On January 15, 1979, oral arguments were heard on the case of *Smith v. Courter,* a professional liability case in which the MSMA has become involved. In this case, the jury awarded punitive damages as well as actual damages, and the decision was upheld by the Court of Appeals.

The case was then transferred to the Supreme Court of Missouri in September. On January 16, however, the Missouri Supreme Court ordered that the transfer was improvidently granted and that the case is to be retransferred to the Missouri Court of Appeals, Western District for adoption of their decision.

In another recent Missouri Supreme Court decision, the Professional Liability Review Board was declared unconstitutional. On February 13, the Court stated that the Board denied the right of access to the courts.

The last day of operation for the Review Board was February 28. All cases pending before it can now proceed directly to court.

MSMA House to consider 17 resolutions

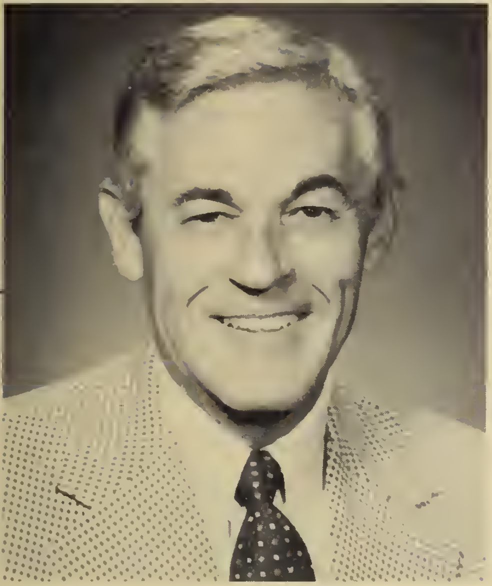
Seventeen resolutions have been introduced to date for consideration by the MSMA House of Delegates at the Annual Session.

All resolutions, plus committee and commission reports and Council minutes, will be referred to Reference Committees for debate. Following testimony on the resolutions, the Committees will submit reports back to the House.

All MSMA members are invited to testify before the Reference Committees. At the opening session of the House, an agenda for each Reference Committee will be available.

To date the following resolutions have been submitted:

No. 1 — Councilor District Change
No. 2 — House of Delegates Representation
No. 3 — Responsibilities of a Medical Witness
No. 4 — Student Membership in MSMA
No. 5 — Physicians Assistants
No. 6 — Professional Liability Review Board
No. 7 — Expert Medical Witnesses and MSMA Membership
No. 8 — Liens by Physicians for Physicians' Services
No. 9 — Practice of Medicine by Unlicensed Persons
No. 10 — Accreditation of Paramedical Personnel
No. 11 — Proposed MSMA Committee on Care of the Aged
No. 12 — Physician Participation in Armed Services
No. 13 — Replacement of Industrial Water Pollution in Missouri
No. 14 — Adjunctive Treatment Resources for the Alcoholic and Family
No. 15 — Alcohol Related Traffic Convictions
No. 16 — Alcohol and Drug Abuse Education
No. 17 — Physician and Pharmacist Cooperation regarding Alcohol and Drug Abuse Problems



John N. Martin, M.D.
President

Andrew McCanse, M.D.
President-Elect

Dr. McCanse to become MSMA President

A Kansas City physician will become the new president of the Missouri State Medical Association on Saturday night, April 21, at the Chase-Park Plaza Hotel in St. Louis. During the Past Presidents' Banquet, President John N. Martin, M.D., a St. Joseph urologist, will present the MSMA gavel to President-Elect Andrew McCanse, M.D., a general surgeon.

Prior to becoming president-elect, Dr. McCanse represented the Seventh District on the MSMA Council for four years. He is the immediate past-chairman of the Council.

Dr. McCanse has been involved in both the private practice of medicine and academic medicine. He has had a general surgery practice in Kansas City from 1961 to 1971 and from 1976 to the present. He has been involved in teaching and administration at the University of Missouri, Kansas City School of Medicine since 1971.

As a member of numerous medical organizations, Dr. McCanse has been active in serving his profession for many years. He is a member of the American Medical Association, American Association for the Advancement of Science, the Missouri Chapter, American College of Surgeons and the Missouri State Surgical Society. He is active in the Jackson County Medical Society and is the editor of the Greater Kansas City Medical Bulletin.

In addition,Dr. McCanse has been active in voluntary health organizations, having served as president of both local and state divisions of the American Cancer Society.

A longtime resident of Missouri, Dr. McCanse is a graduate of the University of Missouri-Columbia and received his M.D. degree from Washington University. He spent his internship and general surgery residency at the Jewish Hospital of St. Louis.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

Council recommends adding student Councilor

During the February meeting, the MSMA Council approved a report of the Ad Hoc Committee on Student Involvement providing that the recommendations of this committee be presented to the House of Delegates as a resolution.

To increase medical student participation in the MSMA, the committee recommended that students be admitted as full voting members of the MSMA with $5 dues per year and that a special student section be created in each of the four Missouri medical schools. The committee felt that the student section should be represented by eight voting delegates to the MSMA House of Delegates, with expenses paid. It was further recommended that the student section be represented by a student Councilor representative on the MSMA Council, with full voting privileges.

The Council also discussed the MSMA Interim Session resolutions concerning House of Delegates representation. The Council voted to recommend to the House that the present number of delegates be retained for a sufficient length of time to evaluate its operation.

In other actions, the Council:

- Approved an Ad Hoc Committee to study the establishment of a Credit Union for the MSMA.
- Reappointed Wilfred E. Wooldridge, M.D., Springfield, as Editor of MISSOURI MEDICINE.
- Approved a resolution from the Action Committee on Socioeconomic Affairs which says that the committee reaffirms its intent to support MSMA members in grievance negotiations.
- Voted to refer the following resolutions from the 1978 Interim Session to the Commission on Interspecialty Medicine: Resolution #13, Standing Committee on Mental Health; #18, Hospices, and #24, House Calls.
- Accepted the list of obsolete surgical and medical procedures from the Commission on Interspecialty Medicine as information with the addendum that many of these procedures were known to the medical profession and some still have application in individual cases. This list will be published in MISSOURI MEDICINE and sent to the Chiefs of Staff of Missouri hospitals.
- Accepted the report of the Committee on the Impaired Physician, noting that Districts 6, 9 and 10 need additional physicians to act as confronters.

MSMA receives AMA membership award

During the AMA Leadership Conference, February 17, 1979, Dr. John N. Martin, MSMA President, accepted the American Medical Association Membership Award. The MSMA received the award "for exceeding its AMA membership record for the second consecutive year, in 1978."

The number of MSMA members belonging to the AMA in 1978 increased by 140 over the previous year. In 1977, there were 3713 dues paying and dues exempt members belonging to the AMA. In 1978, there were 3853. If just 148 additional MSMA members would join the AMA, the Association would be entitled to send another delegate to the AMA House of Delegates.

Resident physicians invited to May workshop in Columbia

Resident physicians and other doctors planning to enter private practice are invited to attend an "Establishing Yourself in Medical Practice" workshop, May 3 and 4, 1979, at the Hilton Inn in Columbia.

Enrollment in the program is limited to about 30 physicians to allow plenty of opportunity for discussion and questions. The physicians who participated in the workshop sponsored last year by the MSMA were very enthusiastic about the program.

If you would like to attend, please register as soon as possible. The registration fee is $60 for members of the MSMA and $75 for non-members.

Additional information was published in the January issue of the MSMA News Round-Up or you may write to the MSMA, Box 1028, Jefferson City, MO 65102. Please include a check if you wish to enroll at this time.

July tours planned for Europe and Russia

Two holiday tours arranged by INTRAV are being offered to MSMA members for July, 1979.

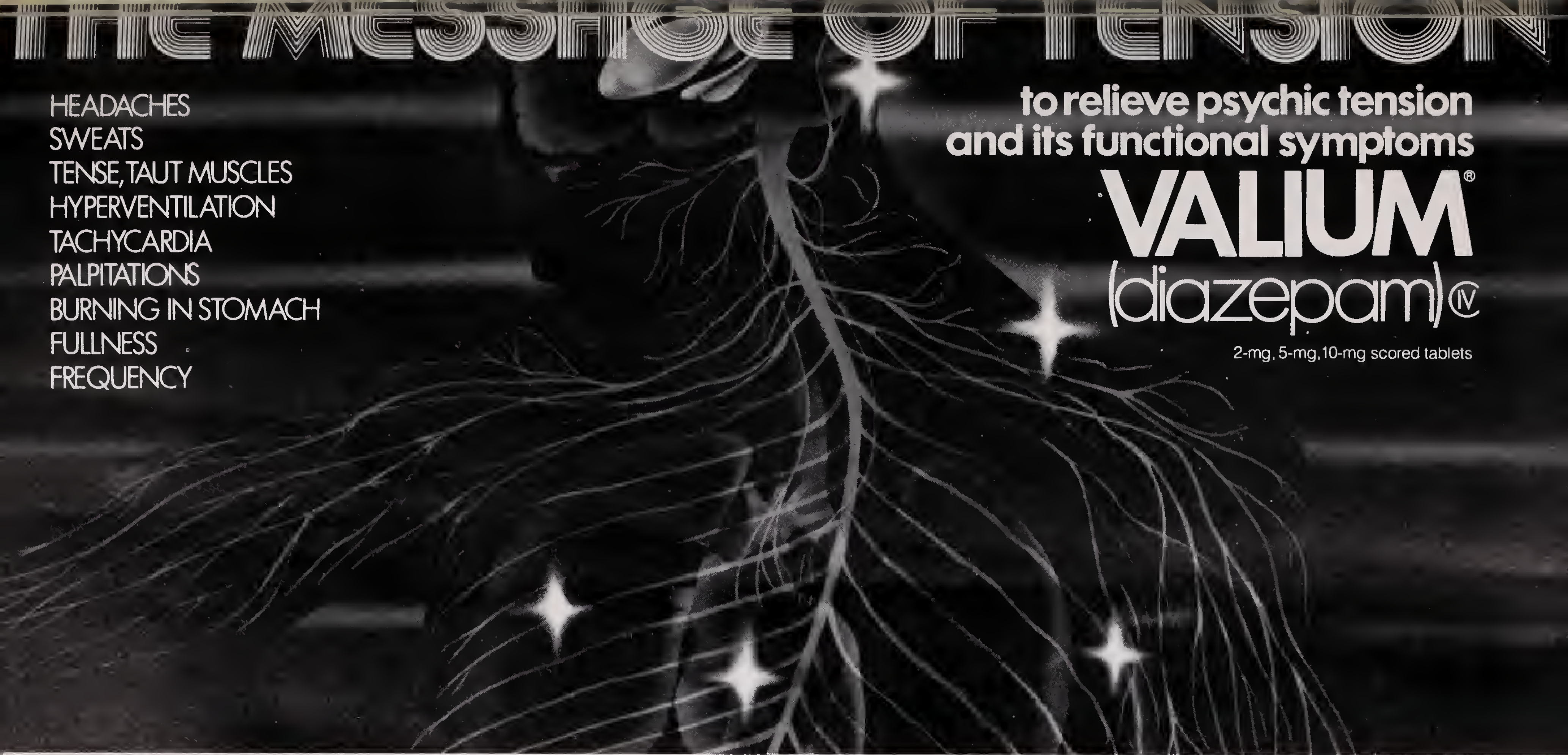
An all-inclusive ten-day tour of the U.S.S.R. leaves Kansas City and St. Louis July 4 and returns July 13, and visits the Russian cities of Moscow, Leningrad and Novgorod. English-speaking guides will make traveling easier and faster, but the schedule also provides free time for sightseeing and shopping. This trip costs $1398 each.

The second tour will go to three exciting cities of Europe for two weeks, July 6-July 19. Four days each will be spent in Paris, France, Interlaken, Switzerland and Florence, Italy. Optional excursions are available to Venice, medieval Siena and the Chianti wine country in Tuscany. This tour costs $1598 each.

A comprehensive program of medical seminars will be conducted on each of the tours. These continuing medical education programs will receive hour for hour credit in Category Two for the Physician's Recognition Award of the AMA.

If you would like additional information, please write: European Adventure or Russian Adventure, Missouri State Medical Association, P.O. Box 1028, Jefferson City, MO 65102.

Attend the 121st Annual Session!!!



VALIUM®(diazepam)

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.
Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

Lowell G. Bennett
Beltone Hearing Aid Service
318 W. Walnut Street
Springfield, Missouri 65806
(417) 866-0551

Len Gidley
Beltone Kansas City Hearing Aid Service
1001A Grand Avenue
Kansas City, Missouri 64106
(816) 471-1943 (816) 471-4105

Beltone Hearing Aid Service
222 Kirkpatrick Building
St. Joseph, Missouri 64501
(816) 279-6501

Don Hicks
Beltone Hearing Aid Service
North Park Mall
101 Range Line Room 248
Joplin, Missouri 64801
(417) 624-0931

Dean Jones
Beltone Hearing Aid Service
P.O. Box 682 400 E. High
Jefferson City, Missouri 65101
(314) 635-3557

Beltone Hearing Aid Service
21 North 10th
Columbia, Missouri 65201
(314) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Servic
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Servic
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Servic
State Fair Shopping Cente
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

Beltone Hearing Aid Servic
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Servic
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

Beltone Hearing Aid Servic
320 Spring
Sweet Springs, Missouri 65
(816) 335-6727

Beltone WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

Accept no substitute for your professional judgment

As a physician, you have the right to prescribe the drug which you believe will most benefit your patients. Now, substitution laws make it more difficult to exercise that right. In many states, unless you specifically direct pharmacists to dispense your brand-name prescription as written, they may be required by law to substitute another drug for your brand-name prescription.

This means that the ultimate drug selection is no longer yours; its source is left to the pharmacist's discretion. You will have forfeited your right to prescribe as you see fit. Preserve your rights. Specify that you will accept no substitution.

When you accept no substitutes...

- You ensure that your patient receives exactly that product you have specified on your prescription
- You choose the quality of the product dispensed to your patient
- You can exercise the right to select a product based upon its proven therapeutic performance and to select a manufacturer that stands behind its brand name or generic product
- You can support the kinds of research programs that are vital to new drug discovery and development
- You can help sustain important physician, pharmacist and patient education services supported by innovative, research-oriented firms

For complete information on the drug substitution law effective in your state, please consult your local Pfizer Representative.

© 1978, Pfizer Inc.

Pfizer **PHARMACEUTICALS**

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, John N. Martin, M.D., St. Joseph
President-Elect, Andrew McCanse, M.D., Kansas City
Vice-President, Donald A. Fakhoury, M.D., Kansas City
Vice-President, Joseph V. Finnegan, M.D., St. Louis
Vice-President, H. B. Ivy, M.D., Springfield
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, James M. Stokes, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Lily Ann Hanes, M.D., St. Louis
Immediate Past-President, Howard J. McAlhany, M.D., Springfield

DELEGATES TO THE AMA

James C. Sisk, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*
Rae W. Froelich, M.D., Lebanon
Francis X. Lieb, M.D., St. Louis, *Alternate*
Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Donald Judd, M.D., St. Louis, *Alternate*

COUNCILORS

Richard V. Bradley, M.D., St. Louis, *Chairman*
Eugene T. Hansbrough, M.D., Poplar Bluff, *Vice-Chairman*

1st District, Richard C. Hedges, M.D., North Kansas City
  Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
  Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Richard V. Bradley, M.D., St. Louis
  Vice-Councilor, Richard Fallon, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
  Vice-Councilor, Frederick D. Peterson, M.D., St. Louis
5th District, H. Peter Ekern, M.D., Mexico
  Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
  Vice-Councilor, Roy W. Pearse, Jr., M.D., Nevada
7th District, Irving H. Clark, M.D., Kansas City
  Vice-Councilor, Ronald A. Youmans, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
  Vice-Councilor, Marvin Singleton, M.D., Joplin
9th District, Claude W. Cooper, M.D., Thayer
  Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, Eugene T. Hansbrough, M.D., Poplar Bluff
  Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, Wilfred E. Wooldridge, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976,* effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

Contents for March, 1979

Scientific Articles

Update on Stapled Bowel Anastomosis; Charles P. McGinty, M.D., Melvin C. Kasten, M.D., Jerry L. Kinder, M.D. and Robert S. Hunt, M.D. 145

Current Concepts in Breast Cancer, *Part III. Staging, Primary Therapy and Adjuvant Chemotherapy;* Carl G. Kardinal, M.D. 151

Leptospirosis and Limb Gangrene, *Case Report;* Michael Pfaller and Chris Wray, Jr., M.D. 157

Infantile Botulism in Missouri, *Case Report;* John Mantovani, M.D., Carol Katz, M.D., Elliot Gellman, M.D. and Stanley Lyss, M.D. 160

Special Article

A Pharmacist's Personal Experiences With Generic Drugs; E. B. Norman, Jr., B.S. 127

News and Features

MSMA News Round-up ..... Insert (118-119)

Photo-Comment by James W. Clawson, M.D. 124

Editor's Corner 125

MSMA Annual Session, Preliminary Program 132

MSMA Auxiliary Convention, Preliminary Program 136

MSMA Annual Session, Delegates 137

MSMA Annual Session, Exhibitors 143

President's Message 163

MSMA Auxiliary 164

Letters to the Editor 165

'Singing Doctors' to Appear at Benefit Auction 167

Continuing Education Coming Events ... 168

In Brief 170

News From the Medical Schools 173

New Members 176

MSMA Financial Statement 178

MSMF Financial Statement 180

Component Society News 180

In Memoriam 180

Index to Advertisers 181

Missouri Medicine in Review 182

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
William M. Hart, M.D., Columbia
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year, Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Photo-Comment by James W. Clawson, M.D., Springfield

Obviously not equivalent! How can we be absolutely sure substituted drugs are not also?*

---

*See "A Pharmacist's Personal Experiences With Generic Drugs," page 127.

Editor's Corner

SMALL BEGINNINGS AND GREAT (?) ENDINGS

The other day a patient asked why I decided to become a doctor. I gave a vague answer implying some sort of celestial steering, but really not saying very much. Later on, I got down to business. Why did I become a doctor? Damned if I knew! So this started quite a flashback of vignettes I had forgotten long since. Finally, I got zeroed in and considerably surprised myself. Here it is.

I am told that, about age seven, I was a spindly sort and my inexperienced mother (I was her firstborn) carted me off to the family physician quite often. On this occasion, I was looking even worse than usual.

The kindly Doctor Fox patiently listened to my mother, stared disapprovingly at my tongue, peered between freckles at my watery green eyes and proclaimed with great finality:

"By God," he said, "worms." Then, to place even greater emphasis on the matter, he reversed his rhetoric. "This boy has worms, by God," he said. That settled it. I had worms.

This diagnosis caused my mother to be given a box of imposing, large, pink pills. I was to take one of these after each meal. The worms were to flee in panic. Where they were to go, I had no idea.

But part of this story my mother never understood. She only knew that the box of worm pills disappeared two or three days later. What really happened was that I grew up in a neighborhood of skilled marble players. On a particular afternoon, my luck was bad. I lost my marbles and was out of the game. Then a great light shined! I lit out for home and returned with the box of worm pills. I convinced one of the fellows that these were the latest thing in jawbreakers, traded them in on a new stake of marbles and, lo, was back in the game. Did pretty well, too. I never did find out what happened to my friend's worms.

But that office call to Dr. Fox engraved on me an indelible respect for medical science because, for a fact, I did have worms. Thereby hangs an even more important tale.

Two or three days before that visit to the doctor, Bob Anderson, the boy next door, and I had been reading about Indians. We learned that Indians ate a great many things which were not on the approved list. One of those were grasshoppers.

At this time, there were no grasshoppers but there was an abundance of fine catalpa worms. Therefore, Bob and I, full of Indian lore, sneaked a frying pan and some butter, built a fire, fried quite a batch of catalpa worms to crispy brown and munched away. Our mothers never knew about this or the visit to the doctor would have come sooner. The timing was such, however, that this incident, soon followed by a split-second diagnosis of "worms," filled me with awe. It convinced me that a guy who could look at my tongue and tell what I had been eating three days before knew something I didn't know, that it must be highly scientific and was, therefore, worthy of my best shot.

And, so, I became a doctor.

Wilfred E. Wooldridge, M.D.

your help is needed by Missouri's future practicing physicians!

The Missouri State Medical Foundation (MSMF) was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

As other loan sources are becoming less available, the Foundation is growing into one of the major sources of loans for aspiring physicians. Send your check today!

Give now to the

MISSOURI STATE MEDICAL FOUNDATION

SPONSORED BY THE
MISSOURI STATE MEDICAL ASSOCIATION
113 Madison St., Jefferson City, Mo. 65102

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 509(a)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

Tenuate® ©
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence.* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633
Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

8-3921 (Y5B7A)

Whether overweight is a complicating factor... or just uncomplicated overweight.

Tenuate® Dospan® Ⓒ IV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense.
And it's responsible medicine.

Merrell

For prescribing information see opposite page.

The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

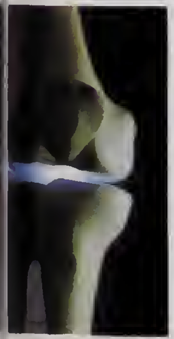
So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions.

However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).

© 19[illegible] The Upjohn Company

RHEUMATOLOG



Motrin 400 TABLETS mg

ibuprofen, Upjohn

The confidence that comes from experience— one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

1685 4

The confidence that comes from experience—
one more reason to prescribe

Motrin 400 mg TABLETS
ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.
Drug interactions. *Aspirin* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.
Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

How Supplied

Motrin Tablets, 300 mg (white)	
Bottles of 60	NDC 0009-0733-01
Bottles of 500	NDC 0009-0733-02
Motrin Tablets, 400 mg (orange)	
Bottles of 60	NDC 0009-0750-01
Bottles of 500	NDC 0009-0750-02
Unit-dose package of 100	NDC 0009-0750-06
Unit of Use bottles of 120	NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

NIM-3

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001

ALDOMET®
(METHYLDOPA | MSD)
TABLETS: 500 mg, 250 mg, and 125 mg
MSD
MERCK
SHARP &
DOHME

Special Article

A Pharmacist's Personal Experiences With Generic Drugs

By

E. B. NORMAN, JR., B.S., *Ava*

I BELIEVE it was John Ruskin who once said, "There is nothing which cannot be made a little more cheaply and sold for a little less." My experience with generic drugs bears this out. I am sure some are satisfactory. I am equally sure many are not. But, as a physician who writes the prescription, how are you to know? Even more important, how are you to know what your patient receives?

After several years, it seems to me that to manufacture human medicines for a cheap price finally gets translated into peddling a product which may be without proper safeguards of efficacy because of a lack of manufacturing checks and inspections. If I did not know how difficult it is to determine the effectiveness of a particular drug, I would be less concerned about the price or the name of the manufacturer.

For example, at one time we had a considerable over-the-counter business of selling phenylephrine-HCl at a low price. We sold so much that we switched from buying pints of the name brand to gallons of a generic brand, also because of price. During the following two years, we had many complaints and a decreasing number of customers for this product. The generic brand was ineffective. The last gallon became discolored and had to be discarded.

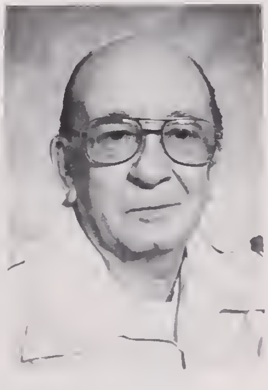
Again, I once bought 10,000 20 mg PETN tablets at a bargain price from a small company whose only claim to fame was that it mailed us a catalogue twice a year. When the tablets arrived, the container appeared to contain about 6,000 tablets. The botton third consisted of light green powder which I assumed represented the remaining 4,000 tablets. Out of all this, we salvaged 2,500 unbroken tablets. We discarded the remainder. But dose integrity is not everything! We also threw away a quantity of chloramphenicol capsules which looked fine, but the Food and Drug Administration stated that this lot was not absorbed.

Again, one of our customers had a problem with an arthritis formula tablet that a local physician requested I place in stock. The man said the coated tablets appeared in his stool. The physician then strongly suggested that we dispense no more of those tablets. When the patient next visited the store, I offered to return his money, but he refused. He said he had learned to crack the tablets with pliers and, thereafter, never found another one of them in his stool.

Even as many superfluous federal employees as clutter up our everyday life, I must say that if they all were chemists and inspectors or laboratory technicians, we would not have enough trained personnel to check out all the potential problems involved in small-factory manufacturing of drugs and the production of raw materials, often without expiration dates. The small manufacturer, or the large distributor who buys from many small and large manufacturers, can seldom supply the

---

E. B. Norman, Jr., pharmacist of Ava, Mo., has been a close friend of mine for many years. Many times, over a campfire or in a comfortable living room, I have learned of his experiences with generic drugs, good and bad.



Mr. Norman

I respect him as a reasonable, thoughtful and highly intelligent person. He deals with the generic drug problem in a much more personal way than we physicians. I think we should listen to such a member of the pharmacy profession. He can tell us something. – Ed.

Business
Overhead
Expense
Insurance
Pharmacy
Date

A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

Your Patient Saves Dollars with Generics by PUREPAC

Here's Proof!

These products and prices were taken directly from newspaper advertising by various retail pharmacies.

QUANTITY	BRAND NAME	PRICE	PUREPAC GENERIC	PRICE	SAVINGS
30	Polycillin (250 mg.)	$8.70	Ampicillin (250 mg.)	**$2.40**	**$6.30**
100	Equanil (400 mg.)©	8.09	Meprobamate (100 mg.)©	**1.83**	**6.26**
100	Darvon Comp. 65 ©	7.83	Propoxyphene HCl Comp. 65 ©	**4.63**	**3.20**
100	Pavabid (150 mg.)	11.73	Papaverine HCl T.R. (100 mg.)	**4.33**	**7.40**
100	Thorazine (50 mg.)	6.03	Chlorpromazine HCl (50 mg.)	**3.23**	**2.80**
100	Librium (10 mg.)©	7.11	Chlordiazepoxide HCl (10 mg.)©	**4.89**	**2.22**

The savings add up! So, when you prescribe generics, specify Purepac, the largest generic manufacturer in America.

Brand names are registered trademarks of Bristol Labs., Wyeth Labs., Eli Lilly & Co., Marion Labs., Smith Kline & French Labs., Roche Labs. respectively.

PUREPAC
Elizabeth, NJ 07207
AMERICA'S LEADING NATIONAL BRAND OF GENERICS

Preliminary Program

MISSOURI STATE MEDICAL ASSOCIATION

121st Annual Session

Chase-Park Plaza Hotel, St. Louis April 19-22, 1979

Thursday, April 19

8:00 AM Registration of Delegates.
10:30 AM **House of Delegates Meeting**, Opening Session.
1:00 PM Reference Committee Meetings.
6:30 PM Missouri State Surgical Society Dinner and Board Meeting.
6:30 PM American Medical Women's Association Cocktails and Dinner.
6:30 PM Social hour preceding Benefit Auction. Chase Club.
7:00 PM First Annual AMA-ERF/MSMF Benefit Auction. Chase Club.

Friday, April 20

7:00 AM MSMA Jogging Event, Forest Park.
8:00 AM Registration.
8:00 AM Missouri University Board of Directors Breakfast and Meeting.
9:00 AM General Session — *Cost Containment.*
Introductions: John N. Martin, M.D., St. Joseph, MSMA President.
Speaker: Hoyt D. Gardner, M.D., Louisville, Ky., President-Elect, American Medical Association.
9:00 AM *Training Session on CPR*
Sponsored by the American Heart Association, Missouri Affiliate.
10:30 AM Intermission to View Exhibits.
11:00 AM *Treatment of Back and Spine Injuries*
Allen P. Klippel, M.D., Omaha, Neb., Director of Emergency Department, Creighton University.
Moderator: Edward Morgan, M.D., St. Louis.
Sponsored by Emergency Room Physicians.
11:00 AM *Problems in Surgical Intensive Care Unit.*
Panel Participants:
John Collins, M.D., Stanford, Calif., Professor and Chairman, Department of Surgery, Stanford University.
Walt Bernards, M.D., Galveston, Tex., Professor of Anesthesiology, University of Texas.
Joseph Ruwitch, M.D., St. Louis, Assistant Professor, Clinical Medicine and Cardiology, Washington University School of Medicine.
Moderator: George L. Tucker, M.D., St. Louis.
Sponsored by the Missouri State Surgical Society.
11:00 AM *The Detection of High Risk Post MI Patient.*
Charles Oliver, M.D., St. Louis.
Six Pitfalls in the Treatment of MI.
Carl White, M.D., Iowa City, Iowa, Professor of Medicine, University of Iowa Medical School.
Moderators:
James C. Clouse, D.O., Clinton.
David D. Thomasson, M.D., Springfield.
Sponsored by the American Heart Association, Missouri Affiliate.
11:00 AM *Annual Charles A. Brasher, M.D. Medical Lectureship.*
Moderator: Daniel L. Schlozman, M.D., Kansas City.
Sponsored by the Missouri Chapter, American Thoracic Society and the American Lung Associations of Eastern and Western Missouri.
11:00 AM *The Use and Abuse of Minor Tranquilizers.*
Gerald Klerman, M.D., Rockville, Md., Director of Alcohol and Drug Abuse.
Moderator: Robert S. Jones, M.D., Columbia.
Sponsored by the Missouri Psychiatric Association.
11:00 AM *Teenage Skin Problems.*
John Strauss, M.D., Iowa City, Ia., Professor and Chairman, Department of Dermatology, University of Iowa.

Moderator: James Sisk, M.D., St. Louis
Sponsored by the Missouri Dermatological Society.

11:00 AM *Surgical Reconstruction of the Rheumatoid Hand.*
Panel Participants:
Paul Weeks, M.D., Robert Karsh, M.D., Carlo Carciolo, M.D. and Leo Whiteside, M.D., St. Louis.
Moderator: Robert E. Kuhlman, M.D., St. Louis.
Sponsored by the Missouri Orthopaedic Association.

12:30 PM Missouri University Alumni Luncheon.
Missouri Thoracic Society Luncheon.

1:00 PM *Status of Emergency Medicine Boards.*
Speaker to be announced.
Sponsored by Emergency Room Physicians.

1:30 PM MOMEDICO.

1:30 PM *How to Evaluate Hirsutism.*
John Strauss, M.D., Iowa City, Ia.
Treatment of Common Dermatoses.
(Panel of Missouri Dermatologists).
Moderator: L. E. Millikan, M.D., Columbia.
Sponsored by the Missouri Dermatological Society.

2:00 PM New Concepts of Breast Cancer: Conservative Surgery for Breast Cancer.
Panel Participants:
Bernard Fisher, M.D., Pittsburgh, Pa., Professor and Chairman of Surgery, University of Pittsburgh.
Carlos A. Perez, M.D., St. Louis, Director of Radiation Oncology, Washington University School of Medicine.
Walter C. Bauer, M.D., St. Louis, Surgical Pathologists-In-Chief Barnes and Associated Hospital.
William L. Donegan, M.D., Milwaukee, Wis., Professor of Surgery, Marquette School of Medicine, University of Wisconsin.
Moderator: Falls B. Hershey, M.D.
Sponsored by the Missouri State Surgical Society.

2:00 PM *Feeling Comfortable in Uncomfortable Situations — Emphasis on Facing Terminal Illness and Death.* Starlight Roof.
The Reverend Bill Little, St. Louis, Author, Consultant, Researcher, Doctoral Candidate in Department of Counseling (Cancer Counseling), Washington University.
Sponsored by the MSMA Auxiliary.

2:00 PM *Everything You Wanted to Know About Blood Platelets, But Were Afraid to Ask.*
Speakers:
W. A. L. Heaton, M.D., St. Louis, Assistant Professor of Pathology, Associate Director of Blood Bank, Barnes Hospital, Washington University School of Medicine.
J. Heinrich Joist, M.D., St. Louis, Associate Professor of Medicine and Pathology, Co-Director, Division of Hematology-Oncology, St. Louis University.
Moderator: Thomas J. Cooper, M.D., St. Louis.
Sponsored by the Missouri Society of Pathologists.

2:00 PM *Fundamentals of Acid-Base Therapy and Practice.*
Walter C. Bernards, M.D., Galveston, Tex., Professor of Anesthesiology, University of Texas.
Moderator: William D. Owens, M.D., St. Louis
Sponsored by the Missouri Society of Anesthesiologists.

2:00 PM *New Developments in the Arthritic Knee and Hip.*
Panel Participants:
Robert Kuhlman, M.D., Leo Whiteside, M.D., Carlo Caciolo, M.D. and Robert Karsh, M.D., St. Louis.
Moderator: Robert E. Kuhlman, M.D., St. Louis.
Sponsored by the Missouri Orthopaedic Association.

2:00 PM "Influenza 1979' — Bruce Hamory, M.D., Columbia, Assistant Professor of Infectious Diseases, Department of Medicine, University of Missouri.
"Unstable Angina" — Martin Alpert, M.D., Columbia, Instructor, Division of Cardiology, Department of Medicine, University of Missouri.
"Current Concepts in Breast Cancer" — Carl Kardinal, M.D., Columbia, Associate Professor of Medicine and Director of the Department of Medicine, Ellis Fischel State Cancer Hospital.
Moderator: Michael C. Perry, M.D., F.A.C.P., Columbia.
Sponsored by the Missouri Society of Internal Medicine.

2:30 PM *Toxicology in the Emergency Department.*
Howard Schwartz, M.D., St. Louis.
Sponsored by Emergency Room Physicians.

3:30 PM Intermission to View Exhibits.

3:30 PM Missouri State Medical Foundation Board Meeting.

4:00 PM **House of Delegates**, Second Session.

4:00 PM Missouri State Allergy Association Business Meeting.

6:00 PM Reference Committee Meetings.

6:30 PM Cocktails and Dinner:
Missouri Society of Pathologists.
Physical Medicine and Rehabilitation.
Missouri Psychiatric Association — "Some Thoughts on Psychotherapy" — Fernando Tapia, M.D., Oklahoma City, Okla., Assistant Chairman, Department of Psychiatry, University of Oklahoma.
Missouri State Surgical Society.
Speaker: Gilbert Campbell, M.D., Professor and Chairman of Surgery, University of Arkansas School of Medicine.

Saturday, April 21

7:30 AM MSMA Auxiliary Public Affairs Breakfast.

8:00 AM Registration.

8:00 AM Missouri Dermatological Society Course on *Modern Dermatological Therapeutics* in conjunction with the American Academy of Dermatology. (Advance registration required.)

9:00 AM *Discuss the Issues with Your AMA Delegates.* (Missouri's AMA Delegates and Alternates will be available for an open forum-type discussion.)

9:00 AM Training Session on CPR.

9:00 AM *New Concepts in Venom Immunity — Clinical Application.*
Speakers: "Stinging Insects" — Martin D. Valentine, M.D., Baltimore, Md., Associate Professor of Medicine, Division of Clinical Immunology, Johns Hopkins.
"Snakes" — H. James Wedner, M.D., St. Louis, Assistant Professor of Medicine, Washington University, Division of Allergy and Immunology.
"Missouri Brown Spider" — Philip C. Anderson, M.D., Columbia, Professor of Medicine, University of Missouri.
Presiding: J. Allen Thiel, M.D., St. Louis.
Moderator: Larry E. Millikan, M.D., Columbia.
Sponsored by the Missouri State Allergy Association and the Missouri Chapter, American College of Pediatrics.

9:00 AM *Progress in Hyperalimentation.*
Moderator: Robert C. Donaldson, M.D., St. Louis.
Sponsored by the American Cancer Society, Missouri Division, Inc.

9:00 AM *Selected Topics — Neuro-Ophthalmology.*
H. Stanley Thompson, M.D., Iowa City, Iowa, Professor of Ophthalmology, University of Iowa.
Moderator: Robert Tobin, M.D., St. Joseph.
Sponsored by the Missouri Ophthalmology Society, Inc.

9:00 AM Program Sponsored by the Missouri OB-GYN Society.

9:00 AM *Pediatric Rehabilitation*
Speaker: Margaret A. Turk, M.D., Columbus, Ohio.
Physical Rehabilitation and the Worker's Compensation Law.
Speaker: Mr. John Dixon, St. Louis.
Moderator: K. Ken Hu, M.D., St. Louis.
Sponsored by Physical Medicine and Rehabilitation.

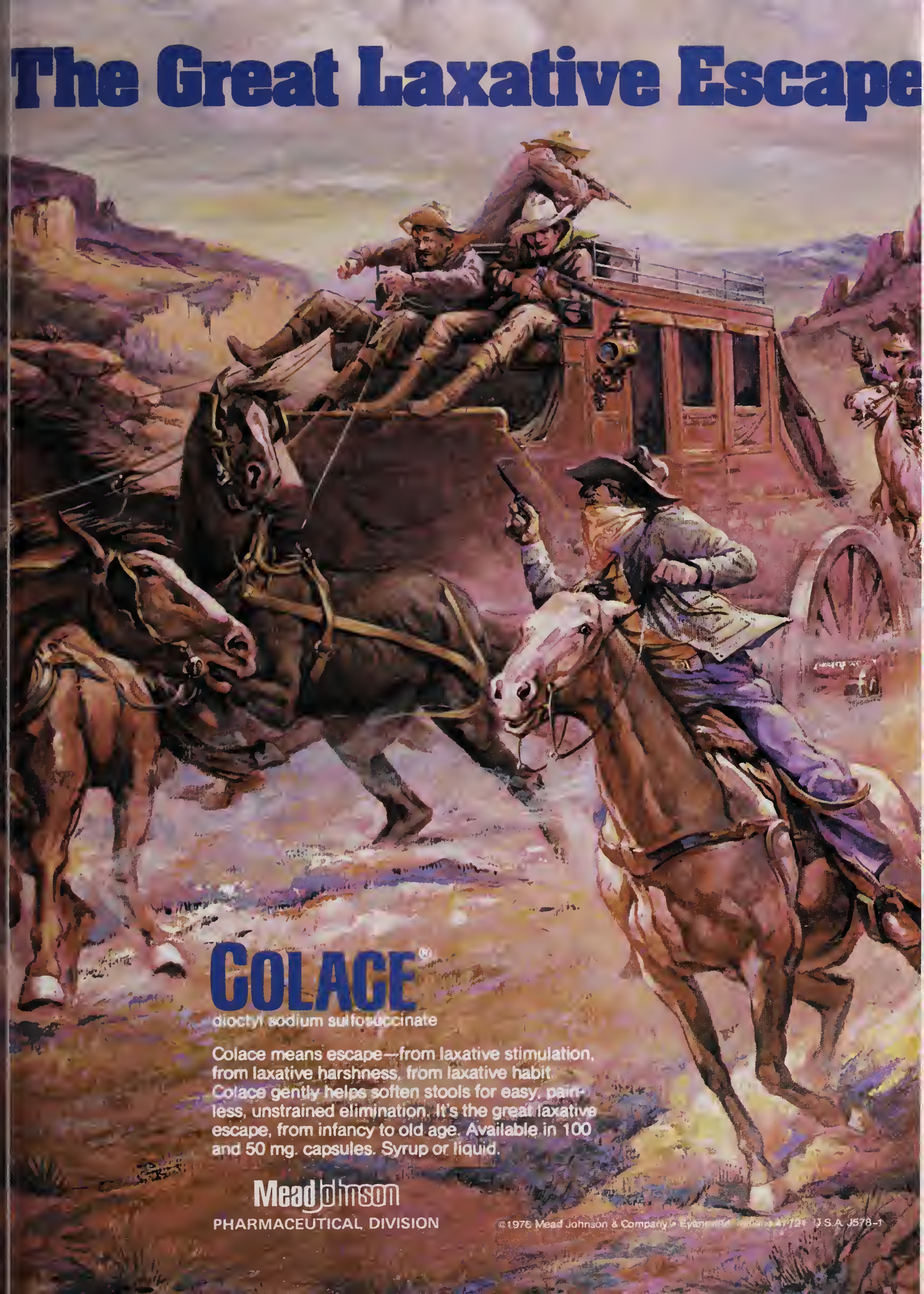
9:00 AM *State Emergency Medical Services.*
Samuel Bonney, M.D., St. Louis.
Sponsored by the Emergency Room Physicians.

9:00 AM *Diagnosis and Treatment of Sinus Disease and Surgery of the Paranasal Sinuses.*
Speaker: Frank N. Ritter, M.D., Ann Arbor, Mich., University of Michigan.
Moderator: J. Regan Thomas, M.D., Columbia.
Sponsored by the Missouri Ear, Nose and Throat Association.

10:00 AM *Hyperthermia.*
Joe Waeckerle, M.D., Kansas City.
Sponsored by the Emergency Room Physicians.

10:00 AM Missouri Radiological Society Board of Directors Meeting.

10:30 AM Intermission to View Exhibits.



The Great Laxative Escape

COLACE®

dioctyl sodium sulfosuccinate

Colace means escape—from laxative stimulation, from laxative harshness, from laxative habit. Colace gently helps soften stools for easy, painless, unstrained elimination. It's the great laxative escape, from infancy to old age. Available in 100 and 50 mg. capsules. Syrup or liquid.

MeadJohnson
PHARMACEUTICAL DIVISION

©1978 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. J578-1

This asthmatic isn't worried about his next breath...

he's active
he's effectively maintained on

QUIBRON®

Each capsule or tablespoonful (15 ml) liquid contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg

- theophylline for effective around-the-clock bronchodilator therapy
- 100% free theophylline

Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.
Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.
Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e., clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.
Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.
How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Liquid in bottles of 1 pint and 1 gallon.
See package insert for complete prescribing information.

Mead Johnson
PHARMACEUTICAL DIVISION

© 1979 Mead Johnson & Company • Evansville, Indiana 47721 U S A MJL 6-4220R4

11:00 AM *Management of the Geriatric Amputees.*
Speaker: K. Ken Hu, M.D., St. Louis.
Live Demonstration of Application of Temporary Lower Extremity Prosthesis.
Speakers: K. Ken Hu, M.D. and his Associates, St. Louis.
Sponsored by Physical Medicine and Rehabilitation.

11:00 AM *Surgical Malpractice in Missouri* — Panel Discussion.
Panel Participants:
Mr. Ronald R. Kennedy, Jefferson City, Executive Secretary, Professional Liability Review Board.
Mr. James E. Hullverson, Mr. Robert G. Burridge, St. Louis, Attorneys at Law.
Moderator: Robert L. Glass, M.D., Sedalia.
Sponsored by the Missouri State Surgical Society.

11:00 AM *Drug Abuse Update.*
Speaker: Ronald Dougherty, M.D., Syracuse, N. Y., Director, Drug Abuse — Chronic Pain Treatment and Rehabilitation Center, Crouse-Irving Memorial Hospital.
Moderator: W. C. Allen, M.D., Columbia.
Sponsored by the Missouri Academy of Family Physicians.

11:00 AM Program Sponsored by the Missouri OB-GYN Society.

11:00 AM *Treatment of Hyperthermia in the Emergency Department.*
Robert Ellenbaas, Ph.D.
Sponsored by the Emergency Room Physicians.

11:00 AM *The Medical Management of the Rheumatoid Arthritic.*
Panel Participants:
Robert Karsh, M.D., Leo Whiteside, M.D., Robert E. Kuhlman, M.D. and Carlo Caciolo, M.D., St. Louis.
Moderator: Robert E. Kuhlman, M.D., St. Louis.
Sponsored by the Missouri Orthopaedic Association.

12:00 Missouri State Allergy Association Luncheon.
Radiology Board of Directors Luncheon.
Missouri Ophthalmological Society, Inc. Luncheon.
Physical Medicine and Rehabilitation Luncheon.

12:30 PM 50-Year Club Luncheon.
Missouri OB-GYN Society Luncheon.
Missouri Society of Neurosurgeons Luncheon.

1:00 PM *Panel Discussion on Trauma.*
Moderator: Edward Morgan, M.D., St. Louis.
Sponsored by the Emergency Room Physicians.

1:30 PM Missouri Medical Political Action Committee Meeting.

1:30 PM *Chronic Pain Treatment.*
Speaker: Ronald Dougherty, M.D., Syracuse, N.Y., Director, Drug Abuse, Chronic Pain Treatment and Rehabilitation Center, Crouse-Irving Memorial Hospital.
Moderator: W. C. Allen, M.D., Columbia.
Sponsored by the Missouri Academy of Family Physicians.

1:30 PM *Battered Child Syndrome,* Clive Lavine, M.D., Columbia.
Infection of Bones and Joints, Tony Wilson, M.D., Columbia.
Do Nothing-vs.-Biopsy — Tomorrow, Lesion of Bone, Corrine Farrell, M.D., Columbia.
Interesting Film Review Session. (Members attending the Missouri Radiological Society session are encouraged to bring interesting x-ray cases and films of bone pathology for discussion and review.)
Moderators: Kendrick C. Davidson, M.D., Kansas City.
Corrine Farrell, M.D., Columbia.
Sponsored by the Missouri Radiological Society.

2:00 PM Presentation of Papers from Junior Fellows.
Sponsored by the Missouri OB-GYN Society.

2:00 PM Continuation of Program by Missouri Ophthalmological Society, Inc.

2:00 PM *Pediatric Brain Tumors — Craniopharyngioma,* John Shillito, Jr., M.D., Boston, Mass.
Moderator: Fred Fowler, M.D., Kansas City.
Sponsored by the Missouri Radiological Society.

2:00 PM *Diagnosis and Treatment of Urologic Problems for Family Practitioners.*
Speakers: Faculty of the Division of Urology, Washington University, St. Louis, William R. Fair, M.D., Chairman.
Sponsored by the Federation of Missouri Urologists.

2:00 PM *Occupational Lung Disease — Introduction,* Raymond G. Slavin, M.D., St. Louis.
Industrial Lung Disease — Trimellitic Anhydride, C. Raymond Zeiss, M.D., Chicago, Ill.

Moderator: Donald Thurston, M.D., St. Louis.
Sponsored by the Missouri State Allergy Association and the Missouri Chapter, American College of Pediatrics.
4:00 PM Missouri State Allergy Association Business Meeting.
5:00 PM Missouri University Medical Alumni Reception.
St. Louis University Medical Alumni Reception.
Washington University Medical Alumni Reception.
6:30 PM Social Hour for those attending Annual Banquet.
7:15 PM Annual Banquet.

Sunday, April 22

7:30 AM House of Delegates Breakfast and Final Session.
9:00 AM Missouri Dermatological Society meeting at Wohl Clinic.

Preliminary Program — 54th Annual Convention

MSMA AUXILIARY

Chase-Park Plaza Hotel, St. Louis April 19-21, 1979

Thursday, April 19

10:00 AM-4:00 PM Registration and Information. Starlight Roof.
10:30 AM Auxiliary Report to the MSMA House of Delegates.
4:00 PM Pre-Convention Board Meeting. Starlight Roof.
6:30 PM First Annual Benefit Auction for AMA-ERF and MSMF.

Friday, April 20

7:15-11:30 AM Complimentary Coffee and Rolls. Regency Room.
8:00 AM-4:00 PM Registration and Information. Starlight Roof.
8:30 AM General Assembly and Business Meeting. Starlight Roof.
11:30 AM Social Hour. Tiara Room.
12:30 NOON Annual Luncheon. Tiara Room.
2:00 PM Seminar: Feeling Comfortable in Uncomfortable Situations — Emphasis on Facing Terminal Illness and Death. Starlight Roof.
The Rev. Bill Little, St. Louis, Instructor in the Social Science Institution, Washington University.
6:00 PM Reception honoring MSMA Auxiliary President for 1979-1980. Chase Club.
7:30 PM Dutch Treat Dinner.

Saturday, April 21

7.30 AM Public Affairs Breakfast. Chase Club.
8:00-11:00 AM MSMA Complimentary coffee and rolls. Regency Room.
10:00 AM General Assembly and Workshop. Starlight Roof.
12:00 NOON Installation Luncheon. Chase Club.
Guests of Honor: John N. Martin, M.D., President of the MSMA.
Andrew McCanse, M.D., President-Elect of the MSMA.
MSMA Advisory Council.

Attend the Outstanding Scientific Program!!

121st ANNUAL SESSION

featuring

36 Scientific Sessions — Sponsored by 19 Medical Specialties

The scientific program is approved for Category I Continuing Medical Education credit by the Missouri State Medical Association. It also is acceptable for Prescribed and Elective hours by the American Academy of Family Physicians.

OFFICIAL DELEGATES

121st Annual Session

County	*Delegates*	*Alternates*
Andrew	J. L. Villahermosa, Savannah	Warren C. Baker, Savannah
Audrain	Ben N. Jolly, Mexico	Mary E. Mullen, Rush Hill
Barton	Alvin R. Cain, Lamar	H. Enrique Piedra, Lamar
Boone	Hugh E. Stephenson, Columbia	
“	William B. See, Columbia	
“	Ben A. Moranville, Columbia	
“	A. Sherwood Baker, Columbia	
“	Kenneth L. Rall, Columbia	
“	William C. Allen, Columbia	
“	George J. Fuchs, Columbia	
“	Thomas W. Burns, Columbia	
“	George W. N. Eggers, Columbia	
“	Leroy J. Miller, Columbia	
“	George P. Wilson, Columbia	
“	Larry E. Millikan, Columbia	
“	Lewis J. Garrotto, Columbia	
“	William D. Bradshaw, Columbia	
Buchanan	Allen I. Herman, St. Joseph	Edward M. Beheler, St. Joseph
“	Edward M. Stevens, St. Joseph	G. Tyson Carpenter, St. Joseph
“	Gary A. Dyer, St. Joseph	Gerald E. Fox, St. Joseph
“	Edmund W. Kline, St. Joseph	Berwyn H. Moen, St. Joseph
“	Wallace McDonald, St. Joseph	Caryl A. Potter, St. Joseph
“	Ernest E. Wadlow, St. Joseph	Joseph A. Prokop, St. Joseph
Butler-Wayne-Ripley-Carter	George H. Ladyman, Poplar Bluff	Kirby Turner, Poplar Bluff
“	William D. Robertson, Wappapelo	E. C. Carlson, Poplar Bluff
“	Henry E. Lestmann, Doniphan	Robert H. Laatsch, Poplar Bluff
“	John L. Hunt, Van Buren	Bennie N. Till, Poplar Bluff
Callaway	Henry Durst, Fulton	Richard A. Osbourn, Fulton
Cape Girardeau	Jean A. Chapman, Cape Girardeau	Gordon W. Eller, Cape Girardeau
“	Charles H. Cozean, Cape Girardeau	J. Marshall Jung, Cape Girardeau
“	John K. Holcomb, Cape Girardeau	Carl F. Ritter, Cape Girardeau
“	Melvin C. Kasten, Cape Girardeau	J. W. Terry, Cape Girardeau
Chariton-Macon-Monroe-Randolph	R. V. Tompson, Moberly	H. T. Lin, Moberly
“	J. E. Campbell, Macon	D. E. Eggleston, Macon
“	F. A. Barnett, Paris	C. H. Lin, Moberly
“	C. C. Cohrs, Moberly	W. D. Chute, Moberly
Clay	Richard P. Bowles, Liberty	T. Bryan Bownik, Kansas City
“	Donald E. Kuenzi, Kansas City	John C. Hagan, III, N. Kansas City
“	William R. McPhee, Kansas City	Nicola Y. Katf, Kansas City
“	Truman B. Schertz, North Kansas City	
“	William D. Soper, Liberty	Carl R. Slaughter, Kansas City
“	F. A. Thomas, Kansas City	David E. Wilson, Kansas City
“	Robert D. Williams, Kansas City	
Clinton	Larry A. Ozenberger, Plattsburg	Paul T. Luckenbill, Plattsburg
Cole	James A. Allan, Jefferson City	Kenneth K. C. Siu, Jefferson City
“	Mary K. McCaffree, Jefferson City	Joseph A. Werth, Jefferson City
“	Robert H. Tanner, Jefferson City	Lawrence E. Giffen, Jefferson City
“	Royal S. Garner, Jefferson City	Philo S. Su, Jefferson City
Cooper	George W. Winn, Boonville	
Dallas-Hickory-Polk-Dade	Olin A. Griffin, Buffalo	Evelyn Griffin, Buffalo
“		
“	Monte R. Kahler, Bolivar	
“	Lee A. McNeel, Greenfield	
Dunklin	John K. Legan, Kenneth	Charles Cash, Kennett
Franklin-Gasconade-Warren	William R. Richardson, Union	

County	*Delegates*	*Alternates*
"	James T. Shaw, Hermann	
"	Harold F. Hoelscher, Warrenton	Gordon W. Stine, Washington
Grand River		
Caldwell	Frank Daley, Hamilton	Hermanito Trinidad, Chillicothe
Carroll	John Platz, Carrollton	Billy D. Howell, Brookfield
Davies	Edward Nixon, Gallatin	Ralph Bohnsack, Brookfield
DeKalb	Charles E. Gilliland, Cameron	Joseph Conrad, Chillicothe
Grundy	Albert Cross, Trenton	
Harrison	Merriam Gearhart, Bethany	Young Park, Chillicothe
Linn	John Dixon, Brookfield	Thomas McArtor, Browning
Livingston	Thomas Cofer, Chillicothe	R. Hamilton Staton, Carrollton
Mercer		
Greene	Stanley S. Peterson, Springfield	Ramon Shane, Springfield
"	H. B. Ivy, Springfield	Arlen Winsky, Springfield
"	Darrell D. Domann, Springfield	Michael S. Clarke, Springfield
"	Donald E. Menchetti, Springfield	Calvin D. Hawkins, Springfield
"	Floyd R. Barnhill, Springfield	David R. Holmes, Springfield
"	Charles J. Ash, Springfield	A. A. Ancheta, Springfield
"	David L. Spalding, Springfield	Michael A. Gentry, Springfield
"	DeArmond Moore, Springfield	Richard W. Kissell, Springfield
"	David W. Hall, Rogersville	F. Thomas Moseley, Springfield
"	Lee H. Vensel, Springfield	Philip R. Fogle, Springfield
"	R. Wayne Shelton, Springfield	Edward Gwin, Springfield
"	Warford Johnson, II, Springfield	Paul T. Berry, Springfield
"	C. Courtney Whitlock, Springfield	Michael H. Luzecky, Springfield
"	James R. Cook, Springfield	Duane C. Hellam, Springfield
"	Francis M. Corry, Springfield	Marion L. Wolf, Springfield
Henry		
Howard	Francis D. Dean, Fayette	
Jackson	Donald E. McIntosh, Kansas City	
"	Milton B. Ozar, Kansas City	
"	Ronald A. Youmans, Kansas City	
"	George E. Volk, Kansas City	
"	Lana K. Minnigerode, Kansas City	
"	Thomas M. Holder, Kansas City	
"	John D. Arnold, Kansas City	
"	Vewiser L. Dixon, Kansas City	
"	Robert C. Fairchild, Kansas City	
"	John R. Goheen, Kansas City	
"	Raymond W. Hartwig, Kansas City	
"	Edwin M. Herman, Kansas City	
"	William D. Hoadley, Kansas City	
"	Michael F. Hughes, Kansas City	
"	Jack D. Moore, Kansas City	
"	Larry G. Piepergerdes, Kansas City	
"	W. Ray Snider, Kansas City	
"	John Layle, Kansas City	
"	Robert A. Slickman, Kansas City	
"	James E. Mallow, Kansas City	
"	Calvin J. Curts, Kansas City	
"	W. Joel Wurster, Kansas City	
"	James H. Whitaker, Kansas City	
"	Barbara N. Buchanan, Kansas City	
"		
"	(Note: The balance of 31 delegates from Jackson County Medical Society had not been elected at the time this issue of MISSOURI MEDICINE went to press.)	
"		
"		
"		
Jasper	Marvin A. Singleton, Joplin	Foster Whitten, Carthage
"	John R. Esther, Joplin	Frank I. Clark, Joplin
"	Edward Grim, Joplin	Lowell K. Pottenger, Joplin
"	Gil B. Manalo, Carthage	Howard H. Roberts, Joplin
"	Robert Willcoxon, Joplin	Wendell Pence, Joplin
Jefferson	Vicente D. Deles, Crystal City	Michael Blank, De Soto
Johnson	Keith D. Jones, Warrensburg	Charles M. Lederer, Warrensburg
Lafayette-Ray	C. T. Riley, Richmond	Jean DeMotte, Richmond
"	Jordan Kelling, Waverly	Catherine Boydston, Odessa

County	*Delegates*	*Alternates*
Lake of the Ozarks	Ruth Kauffman, Versailles	
“	Chris K. Fotopoulos, Osage Beach	
“	Otis Moseley, Osage Beach	
Lewis-Clark-Scotland	Landis Y. Davis, Canton	
Marion-Ralls-Shelby	Stanley Hall, Hannibal	Edward M. Plowman, Hannibal
“	J. Russell Comer, New London	Michael J. Bukstein, Hannibal
“	Charles A. Lichty, Shelbina	Carl R. Kruse, Palmyra
Mid-Missouri		
Crawford	Frank Elders, Cuba	Barbara Russell, Rolla
Dent	Deo Bhati, Salem	Jyotindra Shukla, Salem
Laclede	Rae W. Froelich, Lebanon	Dennis Hite, Lebanon
Maries	DeLane F. Wiench, Rolla	H. Neal Grannemann, Rolla
Phelps	Hugh Bartlett, Rolla	Eugene White, Rolla
Pulaski	George Slahorek, Fort Leonard Wood	William Sullivan, Fort Leonard Wood
Mineral Area		
St. Francois		
Iron		
Madison		
Washington		
Reynolds		
Bollinger		
Moniteau	Lionel M. Gallagher, California	Richard B. Fulks, California
Montgomery	S. J. Byland, Wellsville	
North Central		
Adair	Milton T. English, Kirksville	
Schuyler		
Knox	Francis Tarvydas, Edina	
Sullivan		
Putnam		
Northwest		
Nodaway	Patrick B. Harr, Maryville	Robert E. Dunshee, Maryville
Holt	James D. Humphreys, Mound City	E. D. Imes, Maryville
Atchison	Edward F. Bare, Tarkio	John M. Wanamaker, Rock Port
Gentry	Albert L. Carlin, Stanberry	Bernie Parsons, Albany
Worth	Frank B. Matteson, Grant City	Benjamin F. Byland, Maryville
Ozarks		
Barry	Mary J. Merideth, Cassville	Victor G. Occeno, Monett
Lawrence	K. A. Glover, Mt. Vernon	W. P. Hamilton, Aurora
Stone	Fred L. Wommack, Crane	Charles S. Christianson, Mt. Vernon
Christian	Stanley D. Roper, Ozark	F. R. Esparrago, Monett
Taney	Roy Gillespie, Branson	Charles A. Spears, Branson
Newton	P. B. Anderson, Neosho	R. F. Betz, Neosho
McDonald	L. G. Barnes, Neosho	R. E. Kenney, Neosho
Pemiscot		
Perry-Ste. Genevieve	Job Pontillas, Perryville	
“		
Pettis	A. J. Campbell, Sedalia	
“		
Pike	Wendell J. Martin, Louisiana	Lawrence G. Stuerman, Louisiana
Platte	Ireland Kimball, North Kansas City	Hill C. Thurman, Parkville
St. Charles-Lincoln	Paul H. Rother, St. Charles	Ferdinand P. Del Pizzo, St. Charles
“	John C. Soucy, St. Charles	James L. Carpenter, St. Charles
“	Edward O. Damron, Elsberry	Francisco J. Obando, Troy
“	James P. Felder, St. Charles	Gerald A. Yaeger, St. Charles
St. Louis Metropolitan	Luis B. Anglo, St. Louis	Morris Alex, St. Louis
“	Vernon H. Balster, St. Louis	Osias Almiron, Maryland Heights
“	M. Roman Banton, St. Louis	William Berman, St. Louis
“	Robert Becker, St. Louis	James E. Bowers, St. Louis
“	Ralph L. Biddy, St. Louis	Carlo Caciolo, St. Louis

County	*Delegates*	*Alternates*
"	Arnold S. Block, St. Louis	Rudolph Catanzaro, St. Louis
"	C. Read Boles, St. Louis	Nicholas J. Colosi, Chesterfield
"	Robert L. Bolton, St. Louis	Juan Corvalan, St. Louis
"	Leslie F. Bond, St. Louis	Richard K. Danis, St. Louis
"	Robert D. Brookes, St. Louis	Robert Deitchman, St. Louis
"	Seymour Brown, Chesterfield	Burl M. Dillard, St. Louis
"	R. William Burmeister, St. Louis	John J. Duggan, St. Louis
"	Gerard M. Callaghan, St. Louis	Donald H. Finger, St. Louis
"	Donald E. Callahan, St. Louis	Joseph Gagliardo, St. Louis
"	Stanley J. Ciapciak, St. Louis	David L. Gearhart, St. Louis
"	Jill M. Clayton, St. Louis	A. C. Gerst, Florissant
"	Harry O. Cole, St. Louis	Jonathan Gold, Bridgeton
"	Thomas J. Cooper, St. Louis	Clement B. Grebel, St. Louis
"	Cyril Costello, St. Louis	Nan Mohan Gursahani, St. Louis
"	Edwin J. Cunningham, Ballwin	Thomas D. Hartnett, St. Louis
"	Richard Dames, St. Louis	John Headrick, St. Louis
"	Pablo deUngria, St. Louis	Falls B. Hershey, St. Louis
"	James Diestelhorst, Chesterfield	Vencel Hollo, St. Louis
"	James E. Edwards, St. Louis	Simon Horenstein, St. Louis
"	Daniel Fabito, Hazelwood	Jack Kayes, St. Louis
"	Richard H. Fallon, St. Louis	John J. Kelly, St. Louis
"	Sylvester A. Flotte, St. Louis	John Kenney, St. Louis
"	Daniel M. Fraser, St. Louis	L. Joseph Kennington, St. Louis
"	R. O. Frederick, St. Louis	A R. Khan, St. Louis
"	Paul L. Friedman, St. Louis	Norton Kronemer, St. Louis
"	John A. Gantz, St. Louis	Charles Ladd, St. Louis
"	August W. Geise, St. Louis	Felix E. F. Larocca, St. Louis
"	Elliot F. Gellman, St. Louis	Jerome L'Ecuyer, St. Louis
"	Joseph B. Grindon, St. Louis	Jack R. Lichtenstein, St. Louis
"	David A. Hardy, St. Louis	Vincent LoPiccolo, Jr., St. Louis
"	George L. Hawkins, Jr., St. Louis	Frank Luechtefeld, Bridgeton
"	Marijan Herjanic, St. Louis	George Luther, St. Louis
"	Patrick C. Hogan, St. Louis	T. Cameron MacCaughelty, St. Louis
"	J. Ted Jean, St. Louis	Otakar Machek, St. Louis
"	Tom Johnson, St. Louis	William H. McAlister, St. Louis
"	Otey S. Jones, St. Louis	Allan H. McCown, St. Louis
"	Victor Jones, St. Louis	C. Douglas Meadows, St. Louis
"	Donald R. Judd, St. Louis	Ravi Mehra, St. Louis
"	Mohammed Kabir, St. Louis	Orlando Meneses, St. Louis
"	Edward H. Kowert, St. Louis	Emil Miskovsky, Glencoe
"	Robert E. Kuhlman, St. Louis	Robert J. Mueller, St. Louis
"	John Laird, Florissant	Charles H. Nicolai, St. Louis
"	Paul U. Larson, St. Louis	Frank Niesen, St. Louis
"	Luis F. Lau, St. Louis	Joseph D. O'Keefe, St. Louis
"	Leo LeBlanc, St. Louis	Leopoldo Pardo, St. Louis
"	Charles Lepley, St. Louis	S. D. Parwatikar, St. Louis
"	Francis X. Lieb, St. Louis	John A. Powell, St. Louis
"	Howard Linder, St. Louis	Arthur L. Prensky, St. Louis
"	Jay Liss, St. Louis	George B. Rader, St. Louis
"	J. Otto Lottes, St. Louis	Robert Rainey, St. Louis
"	Napoleon Maminta, Chesterfield	Robert H. Ramsey, Florissant
"	Paul F. Max, St. Louis	John P. Roberts, St. Louis
"	Robert Mayer, St. Louis	Herbert E. Rosenbaum, St. Louis
"	Roger L. Mell, St. Louis	George Roulhac, St. Louis
"	Jay Meyer, St. Louis	S. H. Safdar, St. Louis
"	Melvin E. Meyer, St. Louis	Glennon Schaefer, St. Louis
"	A. Q. Manansala, St. Louis	Bharat K. Shah, St. Louis
"	Jerry Middleton, St. Louis	Richard Sisson, St. Louis
"	Charles Miller, St. Louis	Samuel D. Soule, St. Louis
"	Charles Molden, St. Louis	William P. Svancarek, Manchester
"	Arturo C. Montes, St. Louis	Benito Veluz, St. Louis
"	Wilbur Mullarky, St. Ann	Pio Vilar, St. Louis
"	William T. Newton, St. Louis	William B. Webber, St. Louis
"	David Ohlms, St. Louis	James M. Whittico, St. Louis
"	William J. Ott, St. Louis	Tyrus Winter, St. Louis
"	Theodore J. Paletta, St. Louis	R. Dean Wochner, St. Louis
"	Frederick D. Peterson, St. Louis	Marshall Conrad, St. Louis

County	*Delegates*	*Alternates*
“	Richard T. Quick, St. Louis	Virgilio Dumadag, St. Louis
“	Jean L. Ray, St. Louis	Charles Obermeyer, St. Louis
“	David Reisler, St. Louis	
“	Rosendo A. Reyes, St. Louis	
“	Frank O. Richards, St. Louis	
“	Edward M. Ring, St. Louis	
“	Hubert A. Ritter, St. Louis	
“	Michael Rumelt, St. Louis	
“	Mickey Salmon, St. Louis	
“	Antonio B. Santillano, St. Louis	
“	Melvin Schwartz, St. Louis	
“	John S. Sciortino, St. Louis	
“	Donald G. Sessions, St. Louis	
“	Edward J. Shaw, St. Louis	
“	W. Gary Sherman, St. Louis	
“	William Shieber, St. Louis	
“	Herman Shyken, St. Louis	
“	A. J. Signorelli, St. Louis	
“	David L. Simon, St. Louis	
“	James C. Sisk, St. Louis	
“	Ivan W. Sletten, St. Louis	
“	Kenneth R. Smith, Jr., St. Louis	
“	John Sopuch, St. Ann	
“	Louis P. Stickley, St. Louis	
“	Bruce Stoliar, Florissant	
“	George E. Thoma, St. Louis	
“	Donald Thurston, St. Louis	
“	Frank Valach, St. Louis	
“	Ernest T. Velasco, St. Louis	
“	James C. Vest, St. Louis	
“	Francis Walker, St. Louis	
“	Bruce Walz, St. Louis	
“	Hugh R. Waters, St. Louis	
“	Newton White, St. Louis	
“	Miles C. Whitener, St. Louis	
“	David L. Wilkinson, St. Louis	
“	Carol F. Williams, St. Louis	
“	Robert M. Woolsey, St. Louis	
“	George Zografakis, St. Louis	
“	George M. Bohigian, St. Louis	
“	Robert R. MacDonald, Jr., St. Louis	
“	Harry C. Eggleston, St. Louis	
Saline	K. Thomas Papreck, Marshall	E. Lee McCorkle, Marshall
SEMO		
Stoddard	Fuad H. Kandalaft, Dexter	Ronald T. Hill, Dexter
New Madrid	John P. Sargent, Sikeston	William C. Critchlow, Sikeston
Mississippi	Robert L. Frazier, Charleston	Wilbur L. Davis, Charleston
Scott	Edwin J. Masters, Sikeston	Max A. Heeb, Sikeston
South Central		
Howell	W. T. Morgan, Jr., West Plains	Jack N. Wiles, West Plains
Oregon	A. T. Walker, Thayer	C. F. Smith, Willow Springs
Texas	Joe Wall, Houston	Joe Spears, Cabool
Wright	O. Martin Hasek, Mountain Grove	James A. Hasek, Mountain Grove
Douglas	Marvin C. Gentry, Ava	M. Hasan Choudhury, Mansfield
Ozark		
Webster	T. M. Macdonnell, Marshfield	Robert J. Bareis, Marshfield
West Central		
Bates	Arthur L. Hansen, Butler	Louis E. Gehm, Butler
Cass	Alfred W. Eklund, Pleasant Hill	William W. Haynie, Butler
Cedar	Robert L. Magee, El Dorado Springs	Roy W. Pearse, Nevada
St. Clair	Glen H. Reed, Appleton City	Robert H. Brownsberger, Appleton City
Vernon	L. M. Magruder, Nevada	M. Ted Moore, Nevada

Student Delegates-at-Large

University of Missouri-Columbia

University of Missouri-Kansas City

Washington University
Ms. Michele Berman
Mr. Steven Adler

St. Louis University
Mr. Paul J. Sheehan
Mr. Robert Backer

Past Presidents — Delegates-at-Large

Robert Mueller, St. Louis
Guy N. Magness, University City
H. E. Petersen, St. Joseph
Victor B. Buhler, St. Joseph
Kenneth C. Hollweg, Kansas City
Leonard T. Furlow, Crystal River, Florida
Paul R. Whitener, Chesterfield
Byron M. Stuart, Boonville
Hector W. Benoit, Jr., Kansas City
Doyle C. McCraw, Bolivar
Joseph L. Fisher, St. Joseph
Gerald L. Miller, Kansas City
Walter T. Gunn, St. Louis
E. A. Stricker, St. James
James C. Cope, Rocheport
R. Allen Chandler, Kansas City
Max S. Franklin, St. Louis
Howard J. McAlhany, Springfield

Speaker and Vice Speaker — Delegates-at-Large

Edwin K. Burford, Jr., Cape Girardeau
Lily Ann Hanes, St. Louis

A New Event at the Annual Session!

You Are Invited to Attend and Enjoy

THE FIRST ANNUAL

AMA-ERF/MSMF BENEFIT AUCTION

Thursday, April 19 **Chase-Park Plaza Hotel**

Here's your opportunity to contribute to the AMA-ERF and MSMF (MSMA student loan fund) and enjoy doing it. The MSMA Auxiliary is sponsoring the auction and asks that you donate worthwhile items such as antiques, paintings, photographic art, arts and craft items and other items you consider appropriate. See page 167 for additional information.

Plan Now to Donate and Participate!

COMMERCIAL EXHIBITS LIST

For the 121st Annual Session

Booth	*Exhibitors*
12	Abbott Laboratories North Chicago, Ill.
16	C. W. Alban and Company, Inc. St. Louis
38	American Medical Facilities Corporation Maryland Heights
15	Ayerst Laboratories New York, N. Y.
44	Biomedical Reference Laboratories, Inc. Burlington, N. C.
35	Bio-Science Laboratories St. Louis
41	Blue Shield, St. Louis-Kansas City St. Louis
40	Bristol Laboratories Syracuse, N. Y.
25	Bryco Spring Hill, Kan.
33	Data Service Agency St. Louis
14	Encyclopaedia Britannica Chicago, Ill.
23	Fred S. James & Company of Missouri, Inc. Kansas City
30	General Medical Corporation St. Louis
31 & 32	Hankins Surgical Supply Company Springfield
8	Johnson & Johnson Dermatological Division New Brunswick, N. J.
43	Johnston's, Inc. Shawnee, Kan.
18	The Key Company St. Louis
5	Kremers-Urban Company Milwaukee, Wis.
28	Lemmon Pharmacal Company Sellersville, Pa.
20	McNeil Laboratories Ft. Washington, Pa.
29	Medical Defense Associates, Ltd. Springfield
3	The Medical Protective Company Fort Wayne, Ind.
7	Medserco Incorporated St. Louis
2	Metpath Laboratories, Inc. Kansas City
42	Meyer Laboratories Fort Lauderdale, Fla.
37	Milliken Communications Corporation St. Louis
36	Missouri Medical Insurance Company St. Louis
21	Mutual Association for Professional Services St. Louis
27	Organon Pharmaceuticals West Orange, N. J.
11	Pfizer Laboratories New York, New York
17	Pieroth Brothers, Inc. Des Plaines, Ill.
34	Rowell Laboratories, Inc. Baudette, Minn.
1	Searle Laboratories Chicago, Ill.
13	Seiler Instrument & Manufacturing Company, Inc. St. Louis
24	Smith Kline & French Laboratories Philadelphia, Pa.
10	Social Security Administration Disability Insurance Regional Office Kansas City
4	Stuart Pharmaceuticals Wilmington, Del.
19	Syntex Laboratories, Inc. Palo Alto, Calif.
6	Tab Products Company St. Louis
39	United Medical Equipment Company Kansas City
22	United States Air Force St. Louis
9	Wallace Laboratories Cranbury, N. J.
26	Wyeth Laboratories Philadelphia, Pa.

In lieu of Exhibits, the following firms made cash donations to assist in the sponsorship of Scientific Sessions:

Ciba-Geigy Corporation
Summit, N. J.

Eli Lilly and Company
Indianapolis, Ind.

Geigy Pharmaceuticals
Ardsley, N. Y.

Mead Johnson and Company
Evansville, Ind.

Merck Sharp & Dohme
West Point, Pa.

Parke Davis Company
Morris Plains, N. J.

A. H. Robins Company
Richmond, Va.

contains no aspirin

tablets
Darvocet-N® 100 Ⓘⓥ

100 mg. Darvon-N® (propoxyphene napsylate)
650 mg. acetaminophen

Lilly

700565

Additional information available to the profession on request from Eli Lilly and Company Indianapolis, Indiana 46206

Eli Lilly and Company, Inc.
Carolina, Puerto Rico 00630

Volume 76, Number 3—March, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Copyright, 1979 by Missouri State Medical Association. All Rights Reserved.

CHARLES P. McGINTY, M.D., MELVIN C. KASTEN, M.D.,
JERRY L. KINDER, M.D. *and* ROBERT S. HUNT, M.D., *Cape Girardeau*

Update on Stapled Bowel Anastomosis

Since their first report in 1970, the authors have done single layer, everting, end-to-end anastomosis of the bowel following the principle of triangulation and using the Autosuture instruments in 455 cases. Only one death was related to this method. They feel that this series of cases significantly demonstrates the safety of this method. The authors are in the private practice of surgery.

During the past eight years, our surgical group has clinically evaluated a technique of bowel anastomosis. A single layer, end-to-end, everting anastomosis following the principle of triangulation is performed with the Autosuture stapling instruments. We have completed 455 bowel anastomoses in this manner. We reported our first 37 anastomoses in November, 1970.[1]

In the deliberation over methods of suturing bowel, there are proponents of catgut, silk, steel wire and various forms of synthetic suture. There are those who feel that a two-layer anastomosis is necessary and others who feel that a single-layer anastomosis is preferable. A considerable amount of basic research has been done on the subject of inversion versus eversion, and there are strong proponents of each method. We have reviewed the extensive literature on this subject and now find it irrelevant.[2-16]

It remained for Steichen[17] and Ravitch[18] to clearly show the safety of everting anastomoses when done with the Autosuture stapling devices. Steichen showed that in dogs with and without splenectomy and omentectomy, all survived with a smooth postoperative course, except for one that died of pneumonia. When the dogs were sacrificed at one to four months, no adverse adhesions were found and the lumen was of excellent size. Ravitch has continued both experimental and clinical work with staples and is a leading advocate of the many advantages of these instruments over conventional hand sewing methods.

Development of Present Method

For several years before the Autosuture stapling instruments became available to us, we had been using the principle of triangulation in our bowel surgery following the precepts as outlined so well by the late Carl Heifetz of St. Louis.[19] When the staplers, originally designed by the Russians,[20] were purchased by us from the United States Surgical Corporation, a side-to-side or "functional" end-to-end anastomosis was being proposed for clinical use based on the experiments of Steichen.[17] It seemed only reasonable for us to continue to use the principle of triangulation and staple the three sides of the triangle in an everted manner. Based on the experimental work reported in the literature and the limited clinical experience reported by others, we decided to proceed with our modification of the method which follows:

Steps in Present Method

1. Before the portion of involved bowel is re-

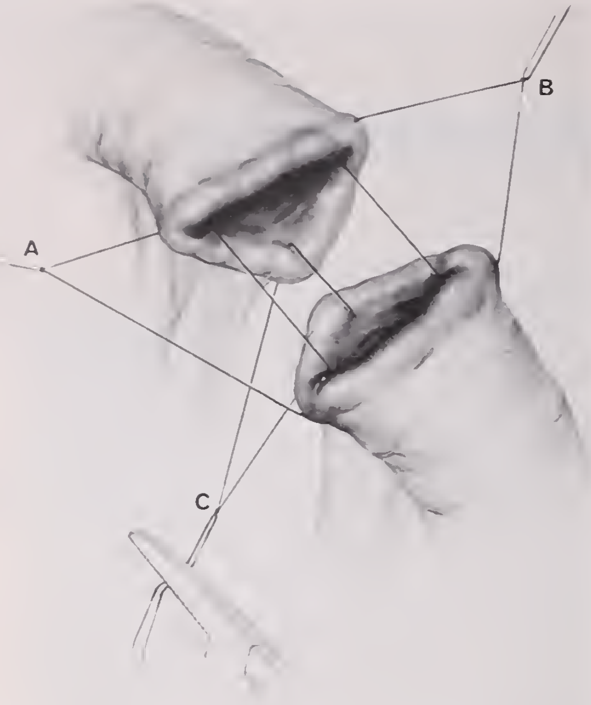


Fig. 1

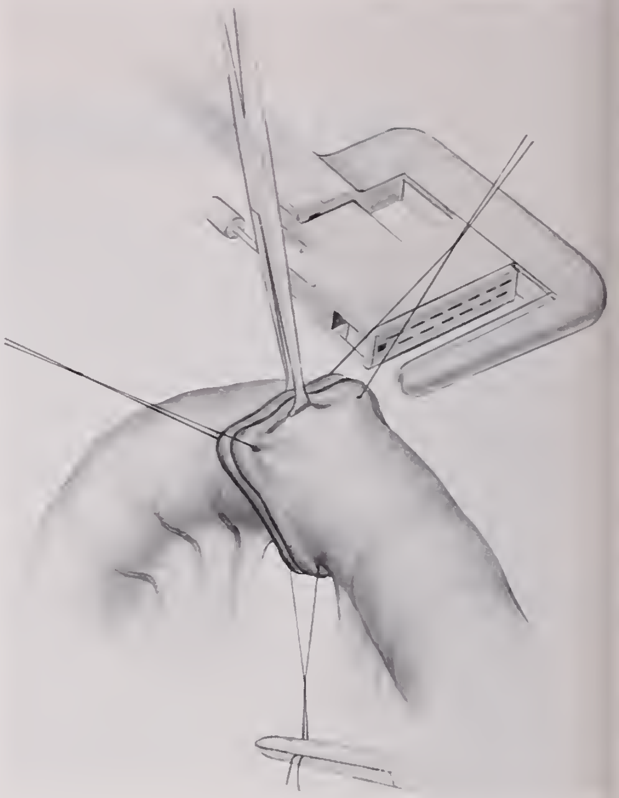


Fig. 2

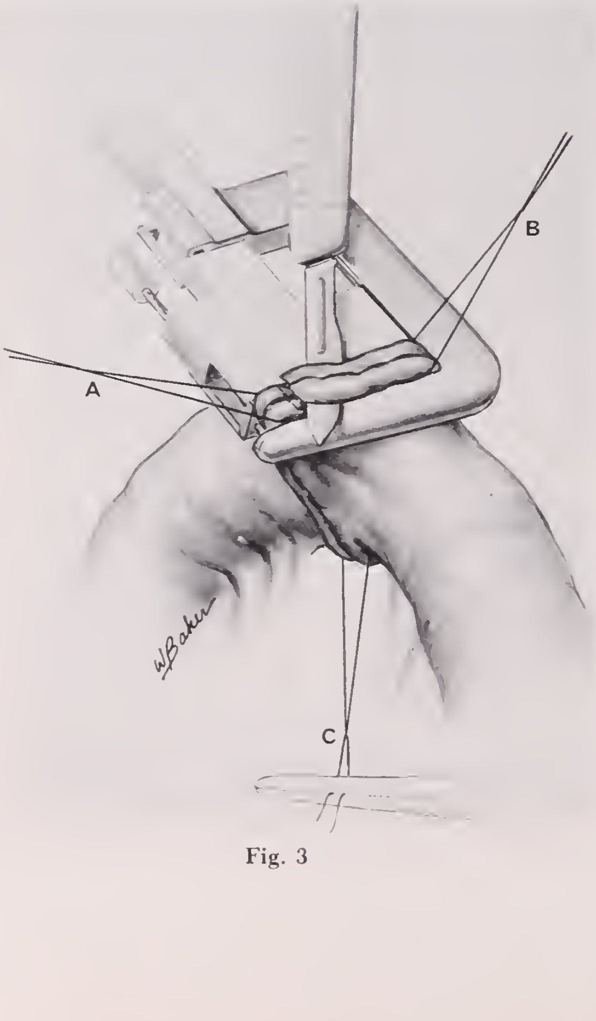


Fig. 3

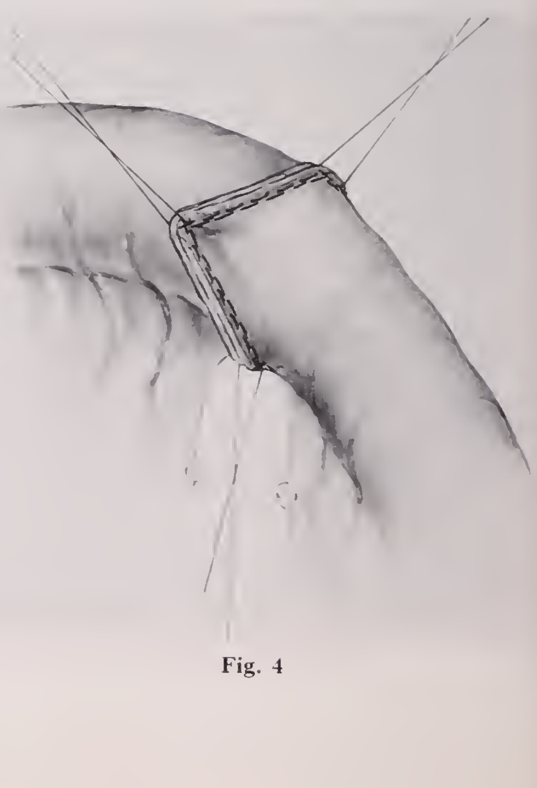


Fig. 4

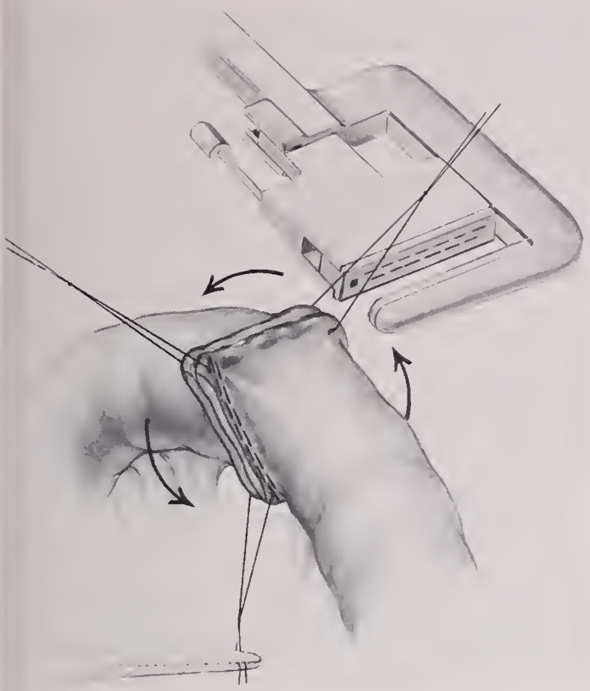


Fig. 5

sected, the area is isolated with cord ties or atraumatic clamps.

2. The bowel is resected between clamps.
3. The clamps are removed and three stay sutures are taken through the ends of the bowel to form a triangle (Fig. 1). The ends of the bowel are drawn together. Gentle stretching with the stay sutures can compensate for disparity in lumen sizes to a great extent. (Sometimes we form the triangle with Allis forceps.)
4. The first side of the triangle is stapled with the TA30 or TA55 depending on the size of the bowel (Fig. 2).
5. The excess bowel wall is excised with a knife (Fig. 3).
6. The second side is stapled (Fig. 4).
7. The excess bowel wall is again removed.
8. The remaining arm of the triangle is stapled. A rotating maneuver will facilitate this procedure (Fig. 5).
9. The excess bowel is excised.
10. Cleansing and irrigation with a solution such as Kantrex^{Rx} is done.
11. The cord ties are removed.
12. The lumen is carefully checked (Fig. 6). There may be some bleeding from the bowel edges.
13. The rent in the mesentery is closed.

CLINICAL MATERIAL

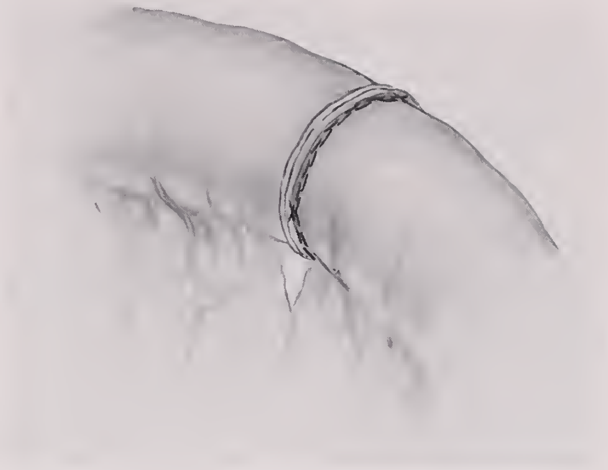


Fig. 6

All 455 anastomoses were done on 417 private, adult patients by the four members of our surgical group at either of two local community hospitals. They were done for a variety of conditions under many different circumstances. Both elective and emergency procedures are included in the series. There was no time for bowel preparation in some instances. With few exceptions, these patients have been closely followed by the same surgeons to death or until the present time. Some of the patients have had a subsequent intra-abdominal procedure performed which allowed inspection of the bowel anastomosis. There have been several autopsies at which time very few adhesions were noted. No patient has required a reoperation for bowel obstruction. Postoperative bleeding from suture lines has not been a problem.

DIAGNOSES

Adenocarcinoma of the left colon was the most common diagnosis (Table 1). This included lesions of the sigmoid, descending colon, and several rather low in the pelvic colon but still amenable to resection and anterior anastomosis. Diverticulitis with complications was the next most common indication for resection. Adenocarcinoma of the

TABLE 1
DIAGNOSES

Carcinoma of colon	219
Diverticulitis of colon	54
Colostomy	15
Esophageal replacement	7
Crohn's disease	20
Small bowel tumor	12
Ileal conduit	31
Strangulated bowel	15
Volvulus, extensive adhesions and trauma	63
Multiple resections (contiguous tumor)	18

TABLE 2
TYPES OF ANASTOMOSES

Colon to colon	232
Small bowel to small bowel	115
Small bowel to colon	108
	455

right or transverse colon followed in frequency. Several colostomies were resected and replaced by end-to-end anastomoses. When the colon was used to replace the esophagus, the colo-colostomy and usually the colo-gastrostomy were done with the stapler. (We did use the method on one esophago-colostomy in the neck with good result.)

The small bowel was resected for both malignant and benign tumors. The small bowel badly damaged from dense adhesion formation, volvulous, strangulation or involved by a contiguous malignant tumor also was resected. During the performance of urinary diversion by ileal conduit, we used the TA30 to form the ileo-ileostomy.

Crohn's Disease was the diagnosis in 20 of our cases. There were several other inflammatory or traumatic lesions treated, including gunshot wounds. Several cases of severe and generalized diverticulosis and a few "neurogenic megacolons" were treated by near total colectomy and ileo-proctostomy.

TYPES OF OPERATIONS

To simplify this study, we divided our anastomoses into three types: (1) colon to colon, (2) small bowel to colon and (3) small bowel to small bowel (Table 2). These categories include sigmoidectomies, radical left colectomies, low proctocolectomies, right colon resections, transverse colectomies, segmental colectomies and near total colectomies.

The small bowel was stapled to the large bowel either for ileo-colostomy following right colectomy or as an ileo-proctostomy following near total colectomy.

The small bowel anastomoses included three very high jejuno-jejunostomies as well as several mid-small bowel procedures. The majority involved the ileum. Abnormal, dilated, edematous bowel was involved many times. Frequently, there was marked disparity between lumen sizes of this and the remaining normal bowel. Nevertheless, a well functioning end-to-end anastomosis was accomplished by this method.

Several patients underwent multiple intra-abdominal bowel anastomoses at the same laparotomy. Colon resection with concomitant small bowel resection for tumor and resection of sigmoid with resection of previous transverse colostomy were not uncommon.

BOWEL PREPARATION

When possible, we tried to make the operation on the bowel an elective procedure. There were, however, a number of instances involving trauma to the abdomen, vascular embarrassment, abscess formation or perforation of a viscus in which we did stapled anastomoses with literally no bowel preparation. The outcome of these procedures was pleasing to us. There was a tendency to get progressively bolder in doing anastomoses even on obstructed, nonprepared bowel. We could list a number of extremely interesting cases, such as that of a young woman who had Crohn's Disease involving the distal ileum with an ileo-sigmoid colic fistula. This responded well to a right colectomy and sigmoid colectomy done in each case with primary anastomosis and no bowel preparation.

For the past five years, we have relied on preparation with an elemental diet, cathartics and enemas. We give Neomycin^{Rx} and Erythromycin Base^{Rx} in three doses during the 20 hours preceding surgery if convenient. This elective group also includes some bowels which were prepared on an elemental diet and mechanical cleansing only. It was difficult to discern a difference in these groups as far as morbidity was concerned.

COMPLICATIONS AND DEATHS

Both the hospital and our office records were used in following these patients to determine the morbidity and mortality. The important complications (Table 3) to be considered in evaluation of this method of anastomosis are (1) leakage from the suture line and (2) postoperative obstruction.

We encountered one case of postoperative partial obstruction in a 67-year-old, white woman who had undergone transverse colostomy resection and also sigmoid resection and low anastomosis for diverticulitis. She developed a temporary intraabdominal sinus tract, which was shown on x-ray. This was associated with symptoms of mild obstruction. She responded well to an elemental diet over a period of six weeks. She became totally asymptomatic and was able to resume a regular diet in three months.

There were four additional instances of postoperative leakage from a suture line. Two sigmoid-cutaneous fistulas became chronic and

TABLE 3
ANASTOMOTIC COMPLICATIONS

Sex & Age	*Diagnosis*	*Operation*	*Complication*	*Treatment*	*Outcome*
63 F	Low lying CA sigmoid & diverticulitis	Proctosigmoidectomy Low anterior anastomosis	Leakage with pelvic peritonitis	Transverse colostomy	Persistent tumor in tract — cobalt and chemo Rx
68 M	Perforated CA splenic flexure adherent to abdominal wall	Left colectomy	Fecal drainage at drain site	I & D wound, no colostomy	No further fecal drainage after one week, tumor in drain site
74 M	CA sigmoid with carcinomatosis and obstruction	Palliative sigmoidectomy	Breakdown of anastomosis and shock		Death — with gross leakage of feces
67 F	Sigmoid diverticulitis	Sigmoid resection and resection of transverse colostomy	Intra-abdominal tracts with temporary partial bowel obstruction	Elemental diet, antibiotics	Healing, patient asymptomatic
46 M	Entero-vesical fistula with Crohn's Disease	Right colectomy with ileo transverse colostomy and closure of bladder	Leak from anastomosis	Closure Hyperalimentation	Healed, patient asymptomatic

failed to heal because they were involved with tumor tracts. One required a transverse colostomy. The other healed except for the tumor tract itself. A 46-year-old man was found to have a fistula between the distal ileum and bladder due to Crohn's Disease. He was treated by right colon resection with ileo transverse colostomy and closure of the bladder. A small leak at the ileo colic anastomosis was closed on the sixth postoperative day. The patient healed nicely on a program of hyperalimentation and has done well since.

Early in our series, a fatal breakdown in anastomosis occurred in a 74-year-old man who had a bleeding, obstructing carcinoma of the sigmoid. Even though a large amount of ascitic fluid was present, we preceded with a palliative resection and anastomosis on this edematous, tumor-beaded bowel. At autopsy the next day, we found feces throughout the peritoneal cavity.

Sixteen other deaths occurred postoperatively (Table 4). Four patients were thought to have had pulmonary embolus as the cause of death. Six elderly patients died of cardiac problems. One died during cardiac arrest on the operating table. Cerebrovascular accidents claimed two more elderly patients. Two patients died of complications after prolonged courses secondary to 12-gauge shotgun wounds. In none of these instances was there any evidence of bowel leakage or other problem related to the anastomosis. One elderly man with liver metastases, ascites, etc. related to carcinoma of the colon died ten days after sigmoidectomy because of what seemed to be liver failure. A 57-year-old, white man died after a heroic attempt to save him. He had a saddle embolus with severe arteriosclerotic changes in the distal aorta and iliac vessel. At the time of surgery, the entire small bowel was black except for the proximal two feet. The left colon was still viable, so the gangrenous bowel was resected and a jejuno left colostomy was performed after major vascular surgery. On the second postoperative day, the patient's embolic process extended and he died in renal failure and shock.

DISCUSSION

We have been pleased with this method of bowel anastomosis and other surgeons have begun to use these principles because of the consistently good results and the saving in anesthesia and operating times.[21-24]

Our method does not involve any type of reinforcing layer with sutures. We depend on the everted, stapled suture line done with the Autosuture instruments. The time spent in doing the anastomosis is about one fourth that of the conventional method.

SUMMARY

We have done single layer, everting, end-to-end anastomosis of the bowel following the principle of triangulation and using the Autosuture

TABLE 4
DEATHS

Sex & Age	*Days Postoperative*	*Cause of Death*	*Operation*	*Other Condition*	*Primary Lesion*
67 M	10	Liver failure	Sigmoidectomy	Liver metastases, ascites, etc.	CA colon
80 F	21	Cerebral embolus	Small bowel resection	Leg ulcers	Richter's hernia with bowel obstruction
74 M	1	Septic shock	Sigmoidectomy	Carcinomatosis	CA
71 M	30	Multiple emboli	Sigmoidectomy	Carcinomatosis	CA
68 F	13	Pulmonary embolus	Transverse colectomy, small bowel resection	Peritonitis (resuscitation during procedure)	Incarcerated umbilical hernia with strangulation
74 F	3	Cardiogenic shock	Transverse colectomy	Congestive heart failure with atrial fibrillation	CA transverse colon
78 M	5	Pulmonary embolus	Sigmoidectomy	Arteriosclerotic gangrene legs	CA transverse colon
60 F	22	Congestive heart failure	Sigmoidectomy	Postoperative cholecystectomy	Perforated CA sigmoid
63 F	21	Pulmonary embolus	Small bowel resection	Congestive heart failure	Strangulated femoral hernia
92 F	10	Heart failure	Right colectomy	Arteriosclerotic heart disease	CA cecum
15 F	14	"Shock lung"	High jejunojejunostomy, etc.	12 gauge gunshot wound of kidney, stomach, diaphragm	Gunshot wound of jejunum
68 M	3	Cardiac arrhythmia	Subtotal colectomy with ileoproctostomy	Arteriosclerotic heart disease	CA colon and multiple polyps
76 F	14	Pulmonary embolus	Right colectomy	Liver and lung metastases	CA right colon
57 M	2	Infarction of kidneys	Jujuno-transverse colostomy	Severe generalized arteriosclerosis	Saddle embolus
82 F	0	Cardiac arrest	Small bowel resection	Low cardiac output syndrome	Gangrene of ileum
43 M	27	Sepsis	Multiple bowel resections, splenectomy, nephrectomy, etc.	12 gauge gunshot wound to chest, abdomen, diaphragm, kidney and spleen	Shotgun wound to left abdomen
83 F	5	Myocardial infarction	Transverse colon resection	Liver metastases	Carcinoma transverse colon

instruments in 455 cases. Our anastomosis-related morbidity is extremely low. Our overall mortality rate was 3.7% Only one death was related to the method of anastomosis. The operating time has been cut markedly by this method and the anastomoses are shown to be consistently good in postoperative x-rays and when observed at secondary laparotomy or autopsy. This series of cases involving human beings rather than laboratory animals is now large enough to significantly demonstrate the safety of the method. During his guest oration before the Society for Surgery of the Alimentary Tract in May of 1975, Professor Goligher of Leeds called for a "proper study" to evaluate everted end-to-end anastomoses done with stapling machines. We hope our study will suffice.

(Continued on page 159)

CARL G. KARDINAL, M.D., *Columbia*

Current Concepts in Breast Cancer

Part III. Staging, Primary Therapy and Adjuvant Chemotherapy

STAGING AND PROGNOSIS

FOR A STAGING SYSTEM to be functional, it must correlate clinical, pathologic and prognostic data in a meaningful and predictive manner. The current clinical staging system in most common use in the United States is the system proposed by the American Joint Commission in cooperation with the International Union Against Cancer.[1, 2] This is a moderately complex TNM system and is outlined in Tables 1 and 2. Another feature adding confusion to the staging of breast cancer patients is the current tendency to utilize pathologic staging. A stage I patient, then, is a T1 or T2 M0 lesion associated with pathologically negative nodes, and stage II is a T1 or T2 M0 lesion with pathologically positive nodes.

Prior to 1972, the staging system in widest use in the United States was the Columbia Clinical Classification of Breast Cancer outlined in Table 3. The real contribution of this system was the listing of the five grave signs, any one of which connoted an exceedingly poor prognosis and was a sign of inoperability. Edema of the arm must be added to the grave signs associated with a poor prognosis. It is important to note that nipple retraction, skin dimpling and nipple discharge are not generally considered poor prognostic signs.

The *location of the primary* lesion in the breast does not seem to be of great prognostic significance.[3] There does seem to be some relationship in regard to location and the propensity of the lesion to metastasize to internal mammary nodes. Inner quadrant lesions have a slightly greater tendency to be associated with internal mammary node involvement than outer quadrant lesions (Table 4).[4] Despite the fact that internal mammary nodes are not removed as part of a standard mastectomy procedure, there is essentially no difference in the prognosis between inner quadrant and outer quadrant tumors.[5] It also should be noted that when the axillary nodes are not involved, the incidence of internal mammary node involvement is only 9.3%.[4]

The patient's age at diagnosis is not a major prognostic factor. Although there has been a feeling that younger patients, especially women less than 35 years of age, do poorer than older patients, this has not been verified. In some series, premenopausal patients do better than postmenopausal. In other series, postmenopausal women over age 55 reportedly have better differentiated tumors and a better prognosis.[6] If age differences exist, they are subtle indeed.

How detailed does the preoperative staging evaluation need to be in a patient with clinical stage I or II breast cancer? Varying pleas have been made for routine preoperative bone scanning, but the yield has been quite low. Gerber *et al*[7] detected only two positive scans in 110 patients and Davies *et al*,[8] scanning within six weeks of the primary surgery, found only nine positives in 192 cases. At the present time, a strong case can be made for limited preoperative staging in clinical stage I and II disease. The most important parts of this staging evaluation are a good history, thorough physical examination, chest x-ray, bilateral mammograms, blood count and blood chemistry profile.

PRIMARY THERAPY

Conceptually, the primary treatment of breast cancer must be considered to consist of two parts: (1) therapy to control the local disease and (2) therapy to control systemic micrometastatic disease in patients at high risk of recurrence. Therapy to control local disease in the breast is a significant issue not only in stage I and II disease but, also, in advanced stage III or IV cases as well. There are currently two major modalities for local control: surgery and radiation therapy. Surgery is a predominant means of local control for stage I and stage II disease and radiation therapy is the predominant means of local control for stage III and stage IV disease, but their roles are overlapping. Currently, adjuvant chemotherapy is the predominant means of treatment of micrometa-

TABLE 1
DEFINITION OF THE TNM CATEGORIES AS APPLIED TO CARCINOMA OF THE BREAST
(American Joint Committee)

T—Primary tumor		
TIS		Pre-invasive carcinoma (carcinoma in-situ), noninfiltrating intraductal carcinoma or Paget's disease of the nipple with no demonstrable tumor. NOTE: Paget's disease associated with a demonstrable tumor is classified according to the size of the tumor.
T0		No demonstrable tumor in the breast.
T1		Tumor of 2 cm or less in its greatest dimension.*
	$T1_a$	With no fixation to underlying pectoral fascia and/or muscle.
	$T1_b$	With fixation to underlying pectoral fascia and/or muscle.
T2		*Tumor more than 2 cm but not more than 5 cm in its greatest dimension.**
	$T2_a$	With no fixation to underlying pectoral fascia and/or muscle.
	$T2_b$	With fixation to underlying pectoral fascia and/or muscle.
T3*		*Tumor more than 5 cm in its greatest dimension*
	$T3_a$	No fixation to underlying pectoral fascia and/or muscle.
	$T3_b$	Fixation to underlying pectoral fascia and/or muscle.
T4		*Tumor of any size with direct extension to chest wall or skin* NOTE: Chest wall includes ribs, intercostal muscles and serratus anterior muscle but not pectoral muscle.
	$T4_a$	With fixation to chest wall.
	$T4_b$	With edema (including peau d'orange), ulceration of skin of breast, or satellite skin nodules confined to the same breast.
	$T4_c$	Both of above
	$T4_d$	Inflammatory carcinoma
N—Regional lymph nodes		
N0		No palpable homolateral axillary nodes.
N1		Movable homolateral axillary nodes.
	$N1_a$	Nodes not considered to contain growth.
	$N1_b$	Nodes considered to contain growth.
N2		Homolateral axillary nodes considered to contain growth and fixed to one another or to other structures.
N3		Homolateral supraclavicular or infraclavicular nodes considered to contain growth, or edema of the arm. NOTE: Edema of the arm may be caused by lymphatic obstruction; lymph nodes may not then be palpable.
M—Distant metastasis		
M0		No evidence of distant metastasis.
M1		Distant metastasis present including skin involvement beyond the breast area.

* Dimpling of the skin, nipple retraction or any other other skin changes except those that occur in T1, T2 or T3 do not affect the classification.

TABLE 2
STAGE GROUPING—TNM SYSTEM
(References 1 and 2)

	% of Total	*5-Year Survival %*
Stage I	17	85
$T1_a$ N0 or $N1_a$ M0		
$T1_b$ N0 or $N1_a$ M0		
Stage II	53	66
T0 $N1_b$ M0		
$T2_a$ N0 or $N1_a$ or $N1_b$ M0		
$T2_b$ N0 or $N1_a$ or $N1_b$ M0		
Stage III	28	41
Any T3 N1 or N2 M0		
Stage IV	2	10
T4 Any N Any M		
Any T N3 Any M		
Any T Any N M1		

TABLE 3
COLUMBIA CLINICAL CLASSIFICATION OF BREAST CANCER

	5-Year Survival %
Stage A	68
1. No clinically involved axillary nodes	
2. No grave signs as in Stage C	
Stage B	54
1. Clinically involved axillary nodes less than 2.5 cm in diameter	
2. No grave signs as in Stage C	
Stage C Any one of five grave signs	35
1. Limited edema of the skin of the breast	
2. Ulceration of the skin	
3. Fixation of the primary tumor to the chest wall	
4. Axillary nodes 2.5 cm or more in diameter	
5. Fixation of the axillary nodes	
Stage D All more advanced cases	7

TABLE 4
INTERNAL MAMMARY NODE INVOLVEMENT IN 342 WOMEN TREATED WITH EXTENDED RADICAL MASTECTOMY (VALAGUSSA *et al*, 1974)

	IMN + %
All patients (70/342)	20
Medial or central quadrant (28/110)	25.4
Lateral quadrant (35/197)	17.7
Junction of medial-lateral (7/35)	20
Axillary node neg — IMN + (15/161)	9.3
Axillary node positive — IMN + (55/181)	30.4

static disease in patients at high risk of recurrence, but chemo-immunotherapy and chemo-hormonal therapy are under evaluation.

Surgical mastectomy remains the primary treatment of choice for early stage breast cancer. Halsted described the technique for the radical mastectomy in 1891. It was rapidly adopted and became the standard procedure against which all other therapy had to be compared. The role of radical mastectomy was not challenged until recent times when arguments began to rage over the relative roles of the extended radical versus standard radical versus simple (total) mastectomy. These arguments were based on precious little data but a great deal of emotion. It soon became apparent that more surgery, the extended radical mastectomy, was not associated with a greater cure rate.[3]

The relative merit of the standard radical mastectomy versus the total mastectomy was not laid to rest until the report of the prospective randomized study of the NSABP in 1977.[9] In this study, patients with clinical stage I disease (no palpable axillary nodes) were randomized to receive either a standard radical mastectomy, a total (simple) mastectomy or a total mastectomy plus regional radiation therapy. Patients with clinical stage II disease (palpable axillary nodes) were randomized to have standard radical mastectomy or total mastectomy plus radiation therapy. A total of 1,765 patients were enrolled in this study: 1,159 into the three clinical node-negative groups (stage I) and 606 into the two clinical node-positive groups (stage II). There were no differences among the three clinically node-negative groups or between the two clinically node-positive groups in terms of the probability of remaining disease-free postoperatively or in absolute survival.

From these data, the only conclusion that can be drawn is that radical mastectomy has no advantage over simple mastectomy in terms of local control or cure of patients with breast cancer. It should be noted, however, that 38% of the clinically node-negative patients who had a radical mastectomy actually had occult metastatic disease in their axillary nodes. It, therefore, would be anticipated that 38% of the clinically node-negative group who had a total mastectomy only also would have occult axillary node metastases, but only 14.2% (49 of 344) developed histologically positive nodes. These patients were then treated with a delayed axillary node dissection. This delay did not influence their overall survival.

This is the third segment of a four-part, comprehensive article which presents a review of the current concepts of breast cancer management. Part IV will appear in a future issue.

The series will deal with risk factors in the development of breast cancer, etiologic considerations, the relative prognosis of the various histologic types of breast cancer, prognostic factors, the mammography controversy, controversies in the primary therapy of breast cancer and the management of the patient with advanced disease. The following outline will provide an overall view of this work:

Part I

Epidemiologic Considerations in Breast Cancer in Women and Men

Part II

Pathologic Considerations and Early Diagnosis

Part III

Staging, Primary Therapy and Adjuvant Chemotherapy

Part IV

Approach to the Patient with Advanced Disease

Dr. Kardinal is Director of Internal Medicine, Ellis Fischel State Cancer Hospital and Cancer Research Center.

This investigation was supported in part by Clinical Cancer Education Grant CA-17946 from the National Cancer Institute, Department of Health, Education and Welfare.

Since the single most important prognostic factor in stage I and II breast cancer is the presence or absence of axillary node metastases, it is currently felt that knowledge of the axillary contents is essential in every case of breast cancer. Therefore, simple or total mastectomy cannot be recommended as the primary surgical procedure of choice despite the fact that it gives local control as good as more radical procedures. The currently recommended procedure is the modified radical mastectomy preserving the pectoralis major muscle but performing an axillary node dissection.[10] All other lesser operative procedures, such as "lumpectomy," subcutaneous mastectomy and segmental mastectomy, remain investigational and cannot be recommended for standard use at this time, but preliminary data in selected cases appear promising.[11]

Radiation therapy also is being evaluated as primary therapy for the local control of stage I and stage II carcinoma of the breast. This also must be considered investigational, but preliminary data also appear promising. The Joint Center for Radiation Therapy of Harvard Medical School has reported 100% local control in 19 patients with stage

I with a median follow-up of 33 months and, also, a 100% local control rate in 45 patients with stage II with a median follow-up of 45 months.[12] Almost all of these patients (56 of 64) had had an excisional biopsy of the breast mass while the remainder had only an incisional biopsy or needle biopsy. While 100% local control was achieved, three of the 19 patients with stage I disease and 13 of the 45 patients with stage II disease subsequently developed distant metastases. This is equivalent to what would be anticipated if the patients had been treated by mastectomy. If these data are confirmed in larger series, the role of radiation therapy in the primary therapy of early stage breast cancer will be established.

The role of postoperative radiation therapy (PRT) in stage I and stage II breast cancer is not established. In the not too distant past, there were strong feelings (and little data) that all patients with positive axillary nodes should receive postoperative radiation. This feeling persists in some parts of the country today. The National Surgical Adjuvant Breast Project (NSABP) has reported the results of a prospective randomized trial evaluating 1,103 patients (470 treated with PRT and 633 controls).[13]

There was no difference in disease-free survival or absolute survival for the PRT group as compared to controls at three, four or five years after surgery. Local recurrences, however, were less in the PRT group (7.8%) when compared to the placebo control group (15.4%), but not when compared to a group receiving perioperative thiotepa (5.9%). Other reports, such as the Cancer Research Campaign Study of Great Britain, have demonstrated an increased early mortality rate in women with stage II disease treated with PRT despite a decreased incidence of local recurrence.[14] The controversy continues to rage with regard to whether PRT is harmful, but it has been firmly established that it does not prolong either absolute survival or disease-free survival. PRT will decrease the incidence of local recurrence in patients with stage II disease. As will be presented in the next section, however, the same is true of adjuvant chemotherapy. At the present time, routine postoperative radiation therapy for early stage breast cancer cannot be recommended.

Primary therapy for stage III or stage IV carcinoma of the breast is more controversial. There are only a few large series of patients with stage III disease available for analysis much less any well done prospective randomized trials. In the series reported by Harris *et al*,[12] cumulative survival probability at five years for stage III disease was only 26%, implying that three quarters of these patients have disseminated disease at diagnosis. Patients who have stage IV disease have only a 0 to 10% five-year survival. These cases represent major problems in clinical management. Again, management must be considered to consist of two components: (1) control of the local disease and (2) treatment of the micrometastatic disease present in patients with stage III disease and the gross metastatic disease present in stage IV patients. Radiation therapy is the usual primary therapy for local control in patients with stage III and IV disease. However, in the Harvard series,[12] local control could only be achieved in 67.5% of 81 patients with stage III disease by the use of radiation therapy, and the best local control was achieved in patients whose primary lesion could be excised.

"Hygienic" mastectomy is another satisfactory means of local control. Many times, however, this is not feasible because the tumor is large and fixed to the skin or pectoralis fascia. Preoperative chemotherapy to attempt to convert inoperable primary lesions to operable is currently being evaluated, but the data, although promising, are too preliminary at the present time.[15]

Patients with stage III breast cancer should be considered to have disseminated micrometastatic disease on day one. As soon as local control is achieved by radiation therapy, surgery or a combination of both, adjuvant chemotherapy such as that described by Bonadonna *et al*[16] for stage II disease should be initiated. This will be discussed in more detail in the next section. Ideally, chemotherapy should be started within two to four weeks after diagnosis. After local therapy for patients with stage IV breast cancer, systemic therapy for metastatic disease should be initiated according to one of the plans outlined in part IV of this series.

ADJUVANT CHEMOTHERAPY

As was discussed in Part II of this series, half of all patients with breast cancer will have a recurrence by ten years and the best prognostic indicator with reference to recurrence is the presence or absence of metastatic involvement of the ipsilateral axillary lymph nodes. Patients with negative axillary nodes (pathologic stage I) have the best prognosis, but 25% of these patients will have recurrence by ten years. However, 75% of patients with positive axillary nodes (pathologic

TABLE 5
L-PAM AS AN ADJUNCT TO SURGERY IN THE MANAGEMENT OF PRIMARY BREAST CANCER

	% Treatment Failures					
	12 Months			24 Months		
	PLACEBO	L-PAM	P	PLACEBO	L-PAM	P
All patients	75.9	89.0	.02	64.4	76.5	.009
Premenopausal	73.2	92.3	.008	63.3	77.2	.043
Postmenopausal	77.4	87.6	.2	71.4	75.6	.097

(Modified from Fisher *et al*[17, 18])

stage II) will ultimately have recurrence and die from their disease. Although the short-term treatment failure rate (at 18 months) of patients with one to three positive nodes is not greatly different from patients with negative nodes, their long-term failure rate (at five and ten years) is increased significantly. Patients with four or more involved nodes are at the greatest risk of recurrence and 85% to 90% will ultimately succumb to metastatic disease.

From these data, it is apparent that mastectomy alone is not adequate treatment for primary breast cancer, especially if ipsilateral axillary nodes are involved with tumor. Conceptually, one must regard a patient with pathologic stage II breast cancer as having systemic micrometastatic disease in at least 75% of cases. At the present time, even though 25% of patients with negative nodes have recurrence, further therapy cannot be recommended until the unequivocal utility and long-term safety of adjuvant chemotherapy can be demonstrated.

In 1972, the National Surgical Adjuvant Breast Project initiated a study to evaluate long-term adjuvant chemotherapy in patients with operable breast cancer who were at high risk of recurrence, i.e., patients with axillary node metastases.[17] *L-PAM* (L-phenylalanine mustard, melphalan, Alkeran) was selected because it has documented activity in breast cancer, its toxicity is relatively mild and it can be given orally. Patients were stratified according to the menopausal status and degree of axillary node involvement (1-3 positive nodes and ⩾4 positive nodes). They were then randomized to receive placebo or L-PAM 0.15 mg/kg p.o. for five consecutive days every six weeks for two years. Treatment was initiated two to four weeks following a conventional or modified radical mastectomy. A total of 211 patients was evaluable. The results are summarized in Table 5. When these data were reported initially, it was clearly evident that premenopausal women with positive axillary nodes treated with L-PAM had significantly fewer recurrences than the placebo-treated group. In postmenopausal patients treated with L-PAM, a decrease in recurrence rate was suggested but was not statistically significant. At 24 months, however, the recurrence rate in premenopausal women treated with L-PAM remained significantly greater than the placebo group, but the trend observed initially in postmenopausal women was not confirmed.

In 1976, Bonadonna *et al*[16] of the Instituto Nazionale Tumori of Milan reported the initial data of a combination chemotherapy trial as adjuvant treatment in operable breast cancer. The criteria for entry into this study were the same as those for the NSABP L-PAM study. A CMF (cyclophosphamide, methotrexate, 5-fluorouracil) combination was utilized. Treatment was initiated two to four weeks after the mastectomy and continued for 12 cycles (12 months). Patients were stratified by age (<49 years vs 50-75 years), number of involved axillary nodes (1 to 3 vs ⩾ 4) and type of mastectomy (standard radical vs extended radical). After stratification, patients were randomized to CMF or no further treatment. A total of 386 patients were evaluable. The results are summarized in Table 6.

Control patients treated with an extended radical mastectomy had a significantly higher recurrence rate (36.1%) than those who received a standard radical mastectomy (19.6%). A difference in recurrence by type of mastectomy was not apparent in the CMF-treated groups. A highly significant decrease in recurrence was noted at 12 months in both premenopausal and postmenopausal patients treated with CMF. The decrease in recurrence initially seemed to be independent of menopausal status. At 36 and 48 months, however, the recurrence rate in postmenopausal women treated with CMF had greatly increased and was no longer statistically significant from the untreated controls (Bonadonna *et al*, 1978).[19] It appears that perhaps the adjuvant treatment may be delaying recur-

TABLE 6
CMF AS AN ADJUNCT TO SURGERY IN THE MANAGEMENT OF 386 PATIENTS WITH PRIMARY BREAST CANCER

	Treatment Failures					
	12 Months			*48 Months*		
	CONTROL %	CMF %	P	CONTROL %	CMF %	P
All Patients	20.6	7.2	$<10^{-6}$	52.7	34.4	$<10^{-4}$
2-3 Nodes Positive	12.1	5.1	$<10^{-3}$	51.9	30.8	$<10^{-2}$
≥4 Nodes Positive	41.5	14.9	$<10^{-4}$	67.6	51.0	0.005
Premenopausal	26.9	6.7	$<10^{-3}$	59.2	25.0	$<10^{-5}$
Postmenopausal	15.0	7.6	<.05	47.6	43.8	0.25
Survival	98.4	98.6		73.6	83.0	0.05

(Modified from Bonadonna, *et al*[19])

rence rather than truly irradicating microscopic disease in postmenopausal patients.

Chemotherapy is capable of controlling local recurrence; local skin and soft tissue recurrence developed in 13.3% of the control group, but only 3.3% of the CMF-treated group. The initial recurrence occurred in a distant site in 81.5% of cases confirming the disseminated nature of this disease. At 12 and 36 months, there was no significant difference in survival in positive node patients treated with CMF as compared to controls, but by 48 months, statistical significance was achieved (p = .05) with 83% of the CMF group still surviving as compared to 73.6% of the untreated control group.

Since it appears that adjuvant chemotherapy by present techniques is only effective in premenopausal patients and since many premenopausal patients become amenorrheic while taking adjuvant chemotherapy (51 of 95 in Bonadonna's series), whether the observed effect is due to a chemically-induced oophorectomy is being questioned. This is being evaluated prospectively, but careful review of the NSABP series as well as the CMF series has failed to show a correlation between the prevention of recurrence and the development of amenorrhea. Also, the observed effect of CMF in decreasing recurrence and increasing survival is greater than that achieved with prophylactic oophorectomy.[19] It, therefore, appears that the effect noted with adjuvant chemotherapy is more than the effect of chemotherapeutically-induced ovarian failure.

Adjuvant chemotherapy in breast cancer remains an investigational procedure and varieties of programs are currently being evaluated in the United States and abroad. It does appear that adjuvant chemotherapy is now of clearly established value in the treatment of premenopausal patients at high risk of recurrence, i.e., patients with ipsilateral axillary node involvement at the time of primary surgery. The most effective and least toxic form of therapy is not yet known. At the present time, however, it appears that the Bonadonna CMF program is becoming a new "standard" of practice, but the less toxic NSABP L-PAM program may ultimately prove to be adequate therapy in selected patients.

The appropriate management of postmenopausal patients with positive axillary nodes remains an enigma. It can now be stated with certainty that these patients are at high risk of recurrence and death from their disease. This is especially true for those with ≥4 involved nodes. By the currently reported techniques, adjuvant chemotherapy is not effective. There are, however, new clinical trials involving different chemotherapeutic agents, different dose schedules and combinations of cytotoxic drugs and hormones. Hopefully, one of these will ultimately prove to be of value.

REFERENCES

1. Manual for Staging of Cancer. American Joint Committee 1977.
2. Cutler, S. J.: Classification of Extent of Disease in Breast Cancer. Semin. Oncol. 1:91-96, 1974.
3. Donegan, W. L.: Mastectomy in the Primary Management of Invasive Mammary Carcinoma. Adv. Surg. 6:1-101, 1972.
4. Valagussa, P., Bonadonna, G. and Veronesi, U.: Patterns of Relapse and Survival Following Radical Mastectomy. Analysis of 716 Consecutive Patients. Cancer 41:1170-1178, 1978.
5. Rozencweig, M. and Heuson, J. C.: Breast Cancer: Prognostic Factors and Clinical Evaluation. *In* Cancer Therapy: Prognostic Factors and Criteria of Response. M. J. Staquet (ed.). New York, Raven Press, 1975, pp. 139-183.
6. MacMahon, B., List, N. D. and Eisenberg, H.: Relationship of Survival of Breast Cancer Patients to Parity and Menopausal Status. *In* Prognostic Factors in Breast Cancer, Forrest, A. P. M. and Kunkler, P. B. (eds.). Livingstone, Edinburgh, pp. 56-64, 1968.
7. Gerber, F. H., Goodreau, J. J., Kirchner, P. T. and Fouty, W. J.: Efficacy of Preoperative and Postoperative Bone Scanning in the Management of Breast Carcinoma. N. Engl. J. Med. 297:300-302, 1977.
8. Davies, C. J., Griffiths, P. A., Preston, B. J., Morris, A. H., Elston, C. W. and Blamey, R. W.: Staging Breast Cancer: Role of Bone Scanning. Brit. Med. J. 2:603-605, 1977.
9. Fisher, B., Montague, E., Redmond, C., *et al*: Comparison of Radical Mastectomy with Alternative Treatments for Primary Breast Cancer. Cancer 39:2827-2839, 1977.

(Continued on page 159)

MICHAEL PFALLER *and*
R. CHRIS WRAY, JR., M.D., *St. Louis*

Leptospirosis and Limb Gangrene

Case Report

A 31-month-old girl with leptospirosis developed Weil's syndrome and limb gangrene which required partial amputation of all limbs. She is the first patient with limb gangrene complicating leptospirosis. The gangrene could have been due to arterial thrombosis, capillary thrombosis or systemic hypoxia.

The authors are from the Division of Plastic Surgery, Washington University School of Medicine.

LIMB GANGRENE is a complication of pneumococcal pneumonia,[1] meningococcemia[2] and chicken pox.[3] We have observed this complication in a 31-month-old girl with leptospirosis. She is the first patient with limb gangrene complicating leptospirosis.

CASE REPORT

A 31-month-old black girl developed fever and rash three days before admission to the hospital. On admission, she had tachypnea, cervical lymphadenopathy, conjunctivitis, right upper quadrant tenderness, a stiff neck and a macular rash and petechiae over the trunk, arms, legs and face. The results of remainder of the physical examination were normal. Some of the laboratory data are shown in Table 1.

The patient received chloramphenicol (100 mg/kg/day) but had persistent fever and increasing jaundice. Two days after admission, she developed a moderately distended abdomen and a palpable gall bladder. A distended gall bladder and air throughout the small bowel were seen on a roentgenogram of the abdomen. A cholecystostomy and small bowel decompression were performed for acalculous cholecystitis. Postoperatively, she had a respiratory arrest and developed congestive heart failure, pulmonary edema, pericardial effusion, renal failure and increasingly abnormal liver function tests. Five days after admission, she had blood in the nasogastric tube and melena. The hematocrit value was 22%. The results of a screen for disseminated intravascular coagulation are shown in Table 1. She became hypotensive and hypoxic. Gastric lavage with iced saline and transfusion with packed red blood cells, plasma and platelets were successful in controlling the bleeding.

On the sixth hospital day, the fluorescent antibody screen for Leptospira in the urine was positive. On the same day, the limbs were noted to be cold, mottled and cyanotic. Eventually, she developed gangrene involving the right arm from the elbow distally, the left ring and little fingers and the distal portions of both feet (Fig. 1). On the 24th day of hospitalization, she underwent the following amputations: (1) below elbow, right; (2) ring and little fingers at the proximal phalanx, left; (3) all toes, left; and (4) forefoot, right. On the 35th day of hospitalization, she underwent excision of the third, fourth and fifth metatarsals and os calcis on the right and left.

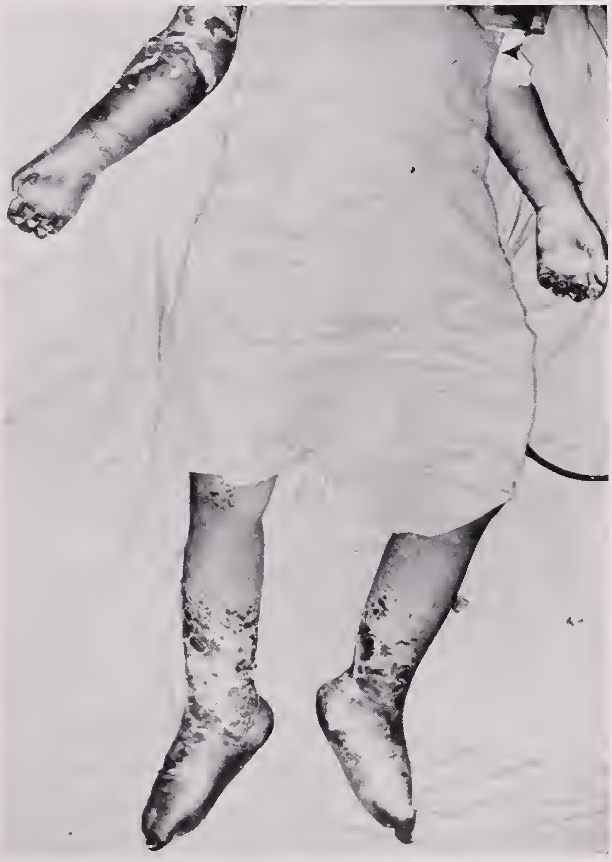


Fig. 1 Gangrene involving right upper limb to below the elbow, the ring and little fingers on the left, all toes on the left and the forefoot on the right.

TABLE 1
LABORATORY VALUES

ADMISSION

Blood

- Hematocrit—31%
- White blood cell count—13,200/mm³
- Platelets—180,000/mm
- Bilirubin—total/direct—3.6/2.3 mg/100 ml
- Glucose—88 mg/100 ml
- Culture—no growth
- Serology—negative
  - Proteus agglutination
  - Heterophile antibody
  - Rocky mountain spotted fever titer
  - Leptospira microagglutination titer
- Immuno-electrophoresis—negative
  - Hemophilius B
  - Pneumococcus
  - Meningococci A, C, & D

Urine

- 2-3 white blood cells/high powered field
- Occasional granular casts
- Culture—negative for bacteria and leptospira
- Bilirubin—positive
- Urobilinogen—positive

Miscellaneous

- Cerebrospinal fluid—cell count—130/mm³ (50% lymphocytes, 50% polymorphonuclear)
  - Glucose—48 mg/100 ml
  - Protein—39 mg/100 ml
  - Culture—no growth
- Throat—culture—no streptococci
- Stool—culture—no pathogens

DURING HOSPITALIZATION

Blood

- Day 2—Bilirubin—total/direct—4.5/2.7 mg/100 ml
  - Alkaline phosphatase—266 IU/l
  - SGOT 79 IU/l
  - SGPT 76 IU/l
- Day 5—Prothrombin time—24%
  - Platelets—60,000/mm
  - Fibrinogen—125 mg/100 ml
  - Fibrin degradation products—4 μg/ml
  - Protamine sulfate ppt.—positive
  - Thrombin time—185 sec
  - Euglobulin lysis time—120 min

Urine

- Day 6—Fluorescent antibody screen for Leptospira positive

On the 49th hospital day, split thickness skin grafts were applied to granulating wounds on her right upper and right and left lower limbs. Ischemic necrosis of the skin and soft tissues and acute inflammation were seen on microscopic examination of the amputated parts. Myositis and muscle regeneration were present focally. The medium sized arteries contained fibrin thrombi. No vasculitis was seen.

She was fitted with a temporary prosthesis and discharged after 95 days of hospitalization.

One month after discharge from the hospital, she was readmitted and had a right ankle disarticulation for persistent infection in the remaining foot.

DISCUSSION

The two basic forms of leptospirosis are the relatively benign anicteric or the life-threatening Weil's syndrome (jaundice, renal damage and hemorrhage).[4] This patient had Weil's syndrome and developed limb gangrene which required partial amputation of all the limbs.

The suggested causes of the limb gangrene in patients with infection include capillary of venous thrombosis, systemic hypoxia, vasospasm due to toxin production by the organism and occlusion of vessels by bacterial emboli.[1, 2] Leptospira damage the capillary endothelium[4, 5] which, in turn, might cause capillary thrombosis. Our patient had thrombotic occlusion of arteries and systemic hypoxia; toxin production by leptospira has not been reported.

Limb gangrene is also associated with hemolytic anemia[6] and disseminated intravascular coagulation.[7] Hemolysis may be a factor in the anemia seen in Weil's syndrome. The onset of peripheral ischemia in our patient was accompanied by a decrease in the hematocrit value, a prothrombin time of 24%, thrombocytopenia and upper gastrointestinal bleeding. However, there was no other evidence of hemolysis. The fibrin degradation products were not increased, but other laboratory data are suggestive of disseminated intravascular coagulation. We believe the bleeding disorder was most likely due to endothelial damage and capillary wall disruption.[4, 5]

REFERENCES

1. Storstein, O.: Incipient Symmetrical Peripheral Gangrene Complicating Pneumonia. Br. Heart. J. 13:411, 1951.
2. Broders, A. C., Jr. and Snell, A. M.: Fulminating Meningococcemia With Gangrene. Am. J. Med. 3:657, 1947.
3. Glyde, O. H. B. and Beales, D. L.: Gangrene of Digits After Chicken Pox. Br. Med. J. 4:284, 1970.
4. Edwards, G. A. and Domm, B. M.: Leptospirosis I and II. Med. Times 94:903 and 1086, 1966.
5. Feigin, R. D. and Anderson, D. C.: Human Leptospirosis. CRC Crit. Rev. Clin. Lab. Sci. 5:413, 1975.
6. Othieno-Okanga, J. B.: A Case of Spontaneous Gangrene Associated With Hemolytic Anemia. East Afr. Med. J. 43:440, 1966.
7. Gilman, W. L., MacDougal, L. G. and Judisch, J. M.: Sickle Cell Disease and Disseminated Intravascular Coagulation. Report of a Childhood Case. Clin. Pediatr. 12:600, 1973.

Stapled Bowel Anastomosis

(Continued from page 150)

REFERENCES

1. McGinty, C.: A New Method of Bowel Anastomosis. Ann. Surg. 165:917, 1967.
2. Abramowitz, H.: A Comparative Study of Small Bowel Anastomoses by Angiography and Microangiography. Surgery 66:564, 1969.
3. Abramowitz, H.: Everting and Inverting Anastomoses: An Experimental Study of Comparative Safety. Am. J. Surg. 121:52, 1971.
4. Gambee, L.: A Single Layer Open Intestinal Anastomosis Applicable to the Small as Well as the Large Intestine. West. J. Surg. 59:1, 1951.
5. Getzen, L.: Intestinal Suturing. Part I: The Development of Intestinal Sutures. Current Problems in Surgery, August, 1969.
6. Getzen, L.: Intestinal Suturing. Part II: Inverting and Everting Intestinal Sutures. Current Problems in Surgery, September, 1969.
7. Getzen, L., Roe, R. and Holloway, C.: Comparative Study of Intestinal Anastomotic Healing in Inverted and Everted Closures. Surg. Gyn. Obst. 123:1219, 1966.
8. Getzen, L.: Clinical Use of Everted Intestinal Anastomoses. Surg. Gyn. Obst. 123:1027, 1966.
9. Gill, W.: Everted Intestinal Anastomosis. Surg. Gyn. Obst. 123:1297, 1969.
10. Halsted, W.: Circular Suture of the Intestine: An Experimental Study. Am. J. Med. Sc. 94:436, 1887.
11. Hamilton, J.: Reappraisal of Open Intestinal Anastomosis. Ann. Surg. 165:917, 1967.
12. Healy, J., McBride, C. and Gallager, H.: Is Serosa to Serosa Approximation Necessary in Intestinal Anastomosis? Surg. Forum 15:297, 1964.
13. Healy, J., McBride, C. and Gallager, H.: Bowel Anastomosis by Inverting and Everting Techniques. J Surg Res. 7:299, 1967.
14. Mellish, R.: Inverting or Everting Sutures for Bowel Anastomoses — an Experimental Study. J. Pediat. Surg. 1:260, 1966.
15. Rusca, J.: Everting Versus Inverting Gastrointestinal Anastomoses: Bacterial Leakage and Anastomotic Disruption. Ann. Surg. 169:727, 1969.
16. Singleton, A.: A Comparative Study of Intestinal Anastomoses. Trans. West Surg. Assn. 75:79, 1968.
17. Steichen, F.: The Use of Staples in Anatomical Side-to-Side and Functional End-to-End Enteroanastomoses. Surg. 64:948, 1968.
18. Ravitch, M. and Steichen, F.: Clinical Experiences With the Soviet Mechanical Bronchus Stapler (UKB 25). J. Thorac. Cardiovasc. Surg. 47:446, 1964.
19. Heifetz, C.: Technique of Single-Layer End-to-End Intestinal Anastomosis by Triangulation. Surg. Clin. of N. Am., February, 1966.
20. Goldman, A.: An Evaluation of Automatic Suture With UKI-60 and UKI-40 Devices by Pulmonary Resection. Dis. Chest 46:29, 1964.
21. Latimer, R.: Automatic Staple Suturing for Gastrointestinal Surgery. Am. J. Surg. 130:766, 1975.
22. Ravitch, M.: New Precise and Rapid Technique of Intestinal Resection and Anastomosis With Staples. Surg. Gyn. Obst. 139:101, 1974.
23. Ravitch, M. and Steichen, F.: Techniques of Staple Suturing in Gastrointestinal Tract. Ann. Surg. 175:815, 1972.
24. Steichen, F.: Clinical Experience With Autosuture Instruments. Surgery 69:609, 1971.

Reprints: Charles P. McGinty, M.D.
Surgical Clinic
10 Doctors Park
Cape Girardeau, Mo. 63701

Breast Cancer

(Continued from page 156)

10. Robinson, G. N., Van Heerden, J. A., Payne, W. S., Taylor, W. F. and Gaffey, T. A.: The Primary Surgical Treatment of Carcinoma of the Breast. A Changing Trend Toward Modified Radical Mastectomy. Mayo Clin. Proc. 51:433-442, 1976.
11. Veronesi, U.: Value of Limited Surgery for Breast Cancer. Semin. Oncol. 5:395-402, 1978.
12. Harris, J. R., Levene, M. B. and Hellman, S.: The Role of Radiation Therapy in the Primary Treatment of Carcinoma of the Breast. Semin. Oncol. 5:403-416, 1978.
13. Fisher, B., Slack, N. H., Cavanaugh, P. J., Gardner, B. and Ravdin, R. G.: Postoperative Radiotherapy in the Treatment of Breast Cancer: Results of the NSABP Clinical Trial. Ann. Surg. 172:711-732, 1970.
14. McDonald, A. M., Simpson, J. S. and MacIntyre, J.: Treatment of Early Cancer of the Breast: Histological Staging and Role of Radiotherapy. Lancet 1:1098-1100, 1976.
15. Morris, D., Aisner, J., Elias, G. and Wiernik, P. H.: Mastectomy as an Adjunct to Combination Chemotherapy. Arch. Surg. 113:282-284, 1978.
16. Bonadonna, G., Brusamolino, E., Valagussa, P., Rossi, A., Brugnatelli, L., Brambilla, C., DeLena, M., Tancini, G., Bajetta, E., Musumeci, R. and Veronesi, U.: Combination Chemotherapy as an Adjuvant Treatment in Operable Breast Cancer. N. Engl. J. Med. 294:405-410, 1976.
17. Fisher, B., Carbone, P., Economou, S. G., Frelick, R., Glass, A., Lerner, H., Redmond, C., Zelen, M., Band, P., Katrych, D. L., Wolmark, N. and Fisher E. R.: 1-Phenylalanine Mustard (L-PAM) in the Management of Primary Breast Cancer: A Report of Early Findings. N. Engl. J. Med. 292:117-122, 1975.
18. Fisher, B., Glass, A., Redmond, C., *et al:* L-Phenylalanine Mustard (L-PAM) in the management of Primary Breast Cancer. An Update of Earlier Findings and a Comparison with Those Utilizing L-PAM Plus 5-Fluorouracil (5-FU). Cancer 39(Suppl.):2883-2903, 1977.
19. Bonadonna, G., Valagussa, P., Rossi, A., *et al:* Are Surgical Adjuvant Trials Altering the Course of Breast Cancer? Semin. Oncol., Dec. 1978 (in press).

JOHN MANTOVANI, M.D., CAROL KATZ, M.D.,
ELLIOT GELLMAN, M.D. *and* STANLEY LYSS, M.D., *St. Louis*

Infantile Botulism in Missouri

Case Report

BOTULISM is a serious illness usually caused by ingestion of food containing botulinal toxin. Signs and symptoms include gastrointestinal upset, visual and pharyngeal dysfunction, hypotonia and weakness which may lead to respiratory insufficiency and death.[1] Since the report of two affected infants by Pickett *et al* in 1976,[2] an infantile form of the disorder has been recognized with increasing frequency. As of Jan., 1978, 58 cases in children under six months of age had been reported to the Communicable Disease Center (CDC) in Atlanta, Ga.[3] We report the first case documented in Missouri.

CASE REPORT

A previously well, five-week-old female infant was brought to the St. Louis Children's Hospital emergency room. She had a one-week history of constipation and a three-day history of lethargy and feeding difficulties. She was a 2,750 gm full-term product of an uncomplicated pregnancy, labor and delivery. Her newborn course was uneventful. She was breast fed with honey-water and Similac supplementation. She had received no medications or immunizations. There was no known toxic exposure.

On the initial physical examination, her temperature was 37 C, pulse rate was 120/min and respirations were 30/min. Blood pressure was 100/65. She weighed 3,650 gm (25th percentile). Her length was 54 cm (50th percentile) and OFC was 36.5 cm (50th percentile). She was profoundly hypotonic with very poor head control and little spontaneous movement. Results of her general physical examination were otherwise normal. She was somnolent but could be aroused by touch or loud verbal stimulation. She withdrew promptly from pinprick. Extraocular movements were full. The pupils were 4 mm bilaterally and unreactive to light. The fundi were normal. There was decreased facial movement, poor suck and diminished gag reflex. Her tongue was midline without fasciculations. Deep tendon reflexes were normal with flexor plantar responses.

Parenteral antibiotic (Ampicillin and Kanamycin) therapy was started for possible sepsis. The laboratory results were normal for complete blood count, urinalysis and urine screen for heavy metals as well as serum electrolytes, calcium, magnesium, manganese, creatine phosphokinase, and spinal fluid examination, cultures of blood, urine and spinal fluid, and a chest x-ray. An electromyogram (EMG) was unsuccessful, but ulnar nerve stimulation at 3/sec and 30/sec was without an incremental or decremental response. The infant's serum and stool, as well as mother's breast milk and the honey used in feeding, were sent to the Communicable Disease Center in Atlanta. Both botulinal toxin (type B) and *C. botulinum* organisms were identified in the stool. *C. botulinum* was also isolated from the honey implicating this as the source.

The child was stable for the initial 12 hours but then developed hypothermia (rectal temperature of 34 C) and shallow, irregular respirations. She was electively intubated and placed on an infant ventilator in an intensive care area. Her temperature normalized with warming lights. Within 48 hours, she was extubated. She was never hypoxemic or hypercapneic.

Subsequently, she had gradual improvement in the weakness and hypotonia although she required gavage feedings for several weeks and remained in the hospital for 33 days. At the time of her discharge, she was feeding well. However, mild weakness, hypotonia and head lag persisted. During the follow-up, she had continued improvement and at age 4½ months, she was neurologically normal.

This is a report of the first case of infantile botulism in Missouri. Infantile botulism is a recently recognized disorder believed to be due to the ingestion of *C. botulinum* spores with intraintestinal toxin production. The symptoms are constipation, lethargy, unreactive pupils and flaccid weakness. The course is variable, but the prognosis for the patient with vigorous supportive care is excellent.

Dr. Mantovani is a Pediatric Neurology Fellow and Dr. Katz is a Pediatrics Resident at St. Louis Children's Hospital. Drs. Gellman and Lyss are on the hospital staff and also in the private practice of pediatrics. This work was supported in part by the Allan P. and Josephine B. Green Foundation.

DISCUSSION

The clinical syndrome of infantile botulism has been well described.[4, 5] The illness occurs in previously well infants from several weeks to six months of age. The initial symptom is usually constipation which is followed within several days by lethargy and poor feeding. The most characteristic sign on examination is dilated and poorly reactive pupils which, in association with moderate to severe hypotonia, generalized weakness, variable deep tendon reflexes and intact sensation, comprise the usual findings. The EMG abnormalities may be helpful in confirming the diagnosis. These include brief-duration, small-amplitude, overly abundant motor unit action potentials (designated "BSAP" by some authors)[6] as well as enhanced and prolonged post-tetanic facilitation and incremental responses after 50 hz stimulation.[7] These electrical findings are consistent with the suggested action of botulinal toxin, which is inhibition of acetylcholine release at cholinergic nerve terminals, probably by interference with exocytosis of the acetylcholine quanta.[8]

Our patient exhibited all of the clinical signs and symptoms of the previously reported cases, although the EMG was not helpful. Other differential diagnostic possibilities in an infant with the subacute onset of weakness and hypotonia include transverse myelitis; spinal cord compression from trauma, abscess or tumor; poliomyelitis; the Guillain-Barre syndrome; diphtheria; toxic effects of heavy metals, organic solvents or insecticides; myasthenia gravis; tick paralysis; snake bite; myositis; and periodic paralysis; as well as sepsis, meningoencephalitis and electrolyte abnormalities such as hypokalemia. Since most of these illnesses are unusual in early life, and are not associated with pupillary abnormalities (except for diphtheria), the association of acquired, flaccid weakness with poorly reactive pupils in an infant should suggest the diagnosis of botulism.

Infantile botulism is thought to result from ingestion of *C. botulinum* spores with enteric colonization leading to *in vivo* toxin production ("toxin infection").[4] Therefore, it differs from the typical adult case in which the patient ingests preformed toxin from contaminated food ("toxin ingestion"). The diagnosis in the infantile cases can be confirmed with the assistance of the Communicable Disease Center in Atlanta by demonstration of botulinal toxin in the stool or rarely in serum, or by isolation of *C. botulinum* in stool culture. Previously identified sources of *C. botulinum* spores include vacuum cleaner dust, yard soil and honey used to supplement breast fed infants as in our case.

All affected infants have been hospitalized and several of them have required artificial ventilation. Two infants have died following respiratory arrest early in the course of the illness, emphasizing the need for vigilant supportive care. The role of botulinal antitoxin in treatment remains to be clarified.

Based on the number of cases reported within the last 18 months, the CDC estimates that as many as 250 cases of infantile botulism requiring hospitalization may be occurring annually.[3] With increasing awareness of this entity, physicians may also identify less severely affected patients, particularly among infants with unexplained constipation and poor feeding.

In view of the self-limited nature of this disorder with early identification and careful supportive care, infantile botulism should be considered in all young infants showing symptoms of hypotonia and weakness.

REFERENCES

1. Cherington, M. F.: Botulism: Ten Year Experience. Arch. Neurol. 30:32, 1974.
2. Pickett, J., Berg, B., Chaplin, E. *et al:* Syndrome of Botulism in Infancy: Clinical and Electrophysiologic Study. NEJM 295:770, 1976.
3. Center for Disease Control: Followup on Infant Botulism. Morbidity and Mortality Weekly Report. 27:#3, Jan. 20, 1978.
4. Arnon, S., Midura, T., Clay, S. *et al:* Infant Botulism. JAMA 237:1946, 1977.
5. Clay, S., Ramsmeyer, C., Fishman, L. *et al:* Acute Infantile Motor Unit Disorder. Arch. Neurol. 34:236, 1977.
6. Engle, M. K.: Brief, Small Abundant Motor Unit Action Potentials. Neurology 25:173, 1975.
7. McKee, K., Kilroy, A., Harrison, W. *et al:* Botulism in Infancy. Am. J. Dis. Child. 131:857, 1977.
8. Kao, I., Drachman, D. and Price, D.: Botulinum Toxin: Mechanism of Presynaptic Blockade. Science 193:1256, 1976.

Correction

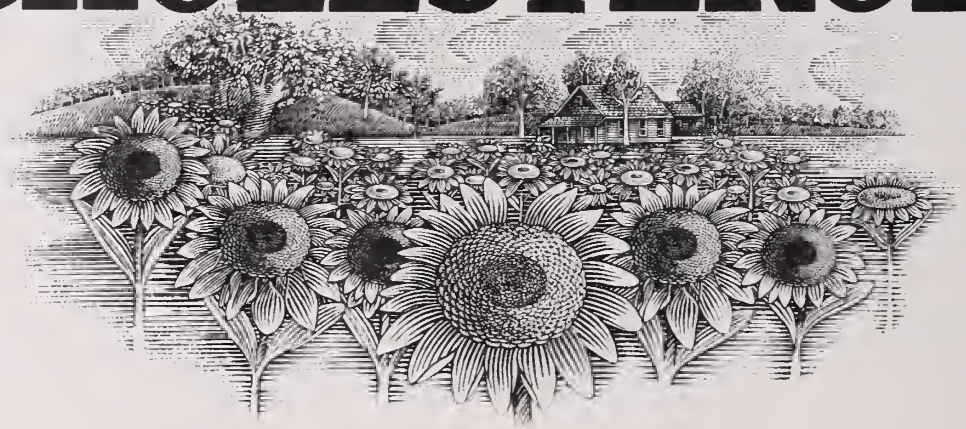
MISSOURI MEDICINE regrets the inadvertent omission of the reference for the article, "Remember the Allen Test" by Charles L. Puckett, M.D., Byron Major, M.D. and Richard Werner, M.D., which was published in the February, 1979 issue.

The reference is as follows:

1. Allen, E. V.: Thromboangiitis Obliterans. Amer. J. of Med. Sc. 178:239-244, 1929.

Readers who wish to order reprints of this article should address their requests to Charles L. Puckett, M.D., Division of Plastic Surgery, University of Missouri School of Medicine, Columbia 65212.

GIVE THEM A TOUGH NEW DEFENSE AGAINST CHOLESTEROL.



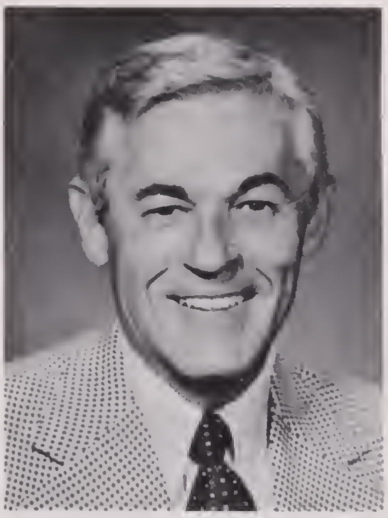
New Sunflower Farms™ Margarine.

A light, delicious margarine containing pure Sunflower oil. So high in polyunsaturates, it can be more beneficial for patients following a total fat modified diet.

**No cholesterol.
Higher in polyunsaturates than any corn oil margarine.**

SUNFLOWER
FARMS
MARGARINE
NEW
CONTAINS
GOLDEN SUNFLOWER OIL

President's Message



John N. Martin, M.D.

Funny! When you put the word "cost" in a statement, how much difference it makes where you put the *cost*. Cost of Health Care asks a question. Health Care Costs makes a statement.

A cost in the "health care cost" is a cost that does nothing for the health of anyone and that's the cost of records, forms and claim blanks.

How much is spent by hospitals to operate a record room? Better yet, what is the cost per patient to have complete and approved records? Does it help the patient to become healthy? All silly questions, I realize, but wouldn't you really like to know? At the rate we are going, the paper around us will be up to our ----. No, it's even higher than that now. If all this paper catches fire, the end of the world is here.

If you collaborate with the bureaucrats, it will be a 50-50 proposition. The bureaucrats will think up the problems and you will have to solve them.

In my opinion, bureaucrats must be experts because, by definition, an "ex" is a has been and a "spurt" under pressure.

Does this happen in your office? When the help isn't clamoring for more pay and shorter hours, the patients are yelling for lower prices and better service.

Like the patient in the hospital who claimed he was cold all night and just lay there and shivered. I asked him if his teeth chattered. He said he didn't know — "we don't sleep together."

Latest educational directive from Washington is on how to tell the weather by a piece of rope. When the rope swings back and forth, it's windy. When it gets wet, it's raining. It's little things like this that make you appreciate the interest the government has in us.

This is a reminder. It could happen again. "The 16th amendment of the Constitution, legalizing federal income taxes, was adopted in 1913. It began as an amendment to a bill in Congress lowering the tariff on imports. The idea was that the small deficit from reduced receipts could be taken care of by a tiny tax on prosperous incomes. On incomes from $4,000 to $12,000, the bite was 1%. Few made over $4,000. That amount had a buying power of at least $25,000 of today's money. Few opposed the idea. It didn't seem important."

There wasn't any HEW then, either.

To the giant of federal government, we must stand up and be counted. As Cervantes said, "He who loses wealth loses much; he who loses a friend loses more; but he who loses courage loses all."

John Kennedy said, "Let us never negotiate out of fear, but let us never fear to negotiate."

MSMA Auxiliary

'Feeling Comfortable in an Uncomfortable Situation —Emphasis on Terminal Illness and Death'

It is my privilege to invite the members of the Missouri State Medical Association, your spouses and friends to attend the seminar which the MSMA Auxiliary is proud to present at 2 p.m. on Friday, April 20 on the Starlight Roof of the Chase-Park Plaza Hotel in St. Louis during the Annual Session.

Mrs. A. J. Campbell
President

The Rev. Bill Little of St. Louis will conduct the seminar entitled "Feeling Comfortable in an Uncomfortable Situation — Emphasis on Terminal Illness and Death." Author of the book, "This Will Drive You Sane," Mr. Little is a doctoral candidate at Washington University in the Department of Counseling with emphasis in the area of cancer counseling. He also is involved in scientific research projects in conjunction with the Division of Radiation Therapy, Department of Radiology at Washington University.

The following statements by two eminent physicians in St. Louis will describe the calibre of the seminar and importance of the subject to be discussed by Mr. Little:

Lily Ann Hanes, M.D. has stated, "I have had the opportunity to participate in the care of selected cancer patients with Mr. Bill Little. Mr. Little has been of significant benefit in recruiting the individual patient's emotions and psyche into working positively for the patient during a course of radiation therapy in which the patient might otherwise have functioned poorly because of an inability to cope with the situation at hand. By all means, urge your members to attend his presentation. It will be a worthwhile experience that each one will remember for years."

Carlos A. Perez, M.D., director of the Division of Radiation Oncology at the Edward Mallinckrodt Institute of Radiology, indicates that patients with cancer undergo significant psychological trauma and there is a great need for emotional psychological support not only when being confronted with the diagnosis but, also, with the rigors of therapy and realities of prognosis.

"Since this is a relatively neglected area of cancer patient care, the National Cancer Institute has expressed interest in supporting some of these programs. The Division of Radiation Oncology, Mallinckrodt Institute of Radiology at Washington University Medical Center is preparing an application for a research project, in association with Rev. William Little, that will attempt to objectively quantitate the impact that psychological counseling may have in improving the attitude of the cancer patients and their relatives toward the emotional and intellectual difficulties that may arise after the diagnosis of a malignant disease. The staff is looking forward to the acquisition of a great deal of useful information through the study."

We sincerely recommend that this investment of two hours of your time will provide a valuable educational and enlightening experience for all who come to hear Mr. Little.

LETTERS

To the Editor

Agrees With Dr. Ackerman's Advice

Dear Dr. Wooldridge:

I was delighted to read the special article by Dr. A. Bernard Ackerman entitled "A Prescription for Ailing Medical Education in America" in the January, 1979 issue of MISSOURI MEDICINE. I find his prescription timely and without flaws. The editor is to be congratulated for following that prescription, i.e., publishing such an article which relates more to the humanities than to scientific endeavors.

In fact, I would hope that the Journal would continue to follow Dr. Ackerman's advice: just as medical schools should teach more from the writings of Hippocrates and Maimonides, Locke, Osler and others so, perhaps, should editors of medical journals reacquaint us with these individuals by republishing significant portions of their writings.

Sincerely,
Clark Watts, M.D.
University of Missouri Medical Center
Columbia

Comments on 'Current Concepts in Breast Cancer Management, Part I'

Dear Dr. Wooldridge:

Doss and Kardinal present an excellent overview of the problem of radiation-associated thyroid carcinoma in their December, 1978, article. I take exception, however, with the following statement: "Patients who have an abnormal scan but no palpable nodules should not have surgery routinely." Dr. Lawrence A. Frohman, whose University of Chicago group has been involved in the largest follow-up study to date, states: "Most believe . . . that the presence of a nodule or nodules in the thyroid of a patient exposed to a significant dose of X-irradiation is an indication for surgical resection. Of those subjects classified as having nodular thyroid disease, 96% were discovered by the scintigram, whereas only 50% were found by palpation prior to knowledge of the results of the scintigram."[1]

The following case history is illustrative: In September of 1977, a 52-year-old man was seen for a routine examination. He had received facial irradiation for acne as a youngster. Physical examination was entirely normal, including palpation of the thyroid. T4 and T3 uptake were within normal limits as well as a routine battery of other laboratory tests. On Oct. 4, 1977, radioactive iodine thyroid scan revealed a cold nodule in the mid right lobe of the thyroid with "mottling" of activity throughout the right lobe. On Dec. 12, 1977, the patient underwent neck exploration, at which time papillary carcinoma of the right lobe of the thyroid was discovered. An adjacent follicular adenoma was also noted and subtotal thyroidectomy was performed. One year postoperatively, a TSH stimulated thyroid scan revealed no ectopic activity. The patient is doing well at this time on Synthroid® replacement.

Frohman, as well as Doss and Kardinal, mention the low-grade malignancy of papillary carcinoma. However, it should be noted that follicular elements were present in 63% of radiation-associated thyroid cancers examined by the Chicago group.[1] Surgical treatment for nodular disease of the thyroid (detected clinically or by scan) would seem prudent at this time for patients with a history of head and neck irradiation in childhood.

Sincerely,
Donald E. Riesenberg, M.D.
Springfield

---

[1] "Radiation-Induced Thyroid Cancer" by Lawrence A. Frohman, M.D., Syllabus of the Postgraduate Assembly of the Endocrine Society, October, 1978.

Authors Respond to Dr. Riesenberg

Dear Dr. Wooldridge:

Dr. Riesenberg's interesting and provocative letter directly strikes the core of the controversy surrounding the appropriate management of individuals exposed to radiation therapy for benign conditions. We are also acquainted with Lawrence A. Frohman's data (*New England Journal of Medicine 294:*1019-1025, 1976 and *American Journal of Medicine, 64:*243-252, 1978), and agree that he is one of the foremost authorities on this subject.

Interestingly, however, there are two statements in the *New England Journal* article which may contribute to the confusion on this issue. In the Results section is the statement: "Without knowledge of the scintigram results, nodules were palpated in 141 subjects (102 single and 39 multiple) by one or more examiners, after review of the scintigram, repalpation led to the discovery of additional thyroid nodules, with the final consensus indicating 174 [i.e., 33 additional] subjects with nodular abnormalities (129 single and 45 multiple)."

In the Discussion is a statement similar to the one cited by Dr. Riesenberg: "The scintigram was responsible for detecting abnormalities in nearly half of the subjects with nodular disease who appeared normal on palpation performed without knowledge of scintigram results." The number of nonpalpable nodules detected by scan only that contained carcinoma is not stated. Undoubtedly, some of them do such as the case cited by Dr. Riesenberg.

Perhaps our statement "patients who have an abnormal scan but no palpable nodules should not have surgery routinely" is too strong, but it was our intent to imply that each case needs to be evaluated individually and followed closely. Scintigrams are often difficult to interpret with certainty. We feel a conservative approach to this situation is appropriate with careful followup, reevaluation and, later, biopsy as indicated. We feel this approach is safe because of the low grade nature of these lesions. There has only been one death in Frohman's series and this occurred in a clinically advanced lesion. Currently, we feel a more aggressive approach with early biopsy is probably only justified when long-term followup is not possible.

Sincerely,
Carl G. Kardinal, M.D.
Director of Internal Medicine
Larry L. Doss, M.D.
Associate Director of Radiation Therapy

'My Country Right or Wrong' Is Right

Dear MSMA President Martin:

I liked your editorial on page 37 of the January, 1979 edition of MISSOURI MEDICINE right up to your last paragraph. I belong to the old school of thought that believes "my country right or wrong" is a valid statement and, also, "my mother drunk or sober." We must have some loyalties and if we can't be loyal to our country and our parents — then who?

Sincerely yours,
Wayne A. Simril, M.D.
St. Louis

Thank You for 'In Review'

Dear Dr. Pollock:

Just a short note to say hello and to thank you on behalf of our Medical Staff for "Missouri Medicine in Review." The physicians thoroughly enjoy the column, and I thought you would like to know.

Sincerely,
Barbara C. Romeieh, CMSS
Medical Staff Office
North Kansas City Memorial Hospital

WHAT THEY'RE SAYING . . . .

"It is hard for me to understand, for example, why more than 30 years ago when I had my appendix removed by a small town general practitioner, the fee was 60% of what I charge today as an urban, boarded specialist in surgery. And, at that time, it cost me 3 cents to mail a letter and 5 cents for a newspaper, 15 cents for a Sunday paper. I recently paid $1 for a Sunday paper that was decrying the skyrocketing costs of medical care." — ROBERT S. FLOM, M.D., President, Minnesota Medical Association (November, 1978)

Librax®
Each capsule contains 5 mg
chlordiazepoxide HCl and 2.5 mg clidinium Br.

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

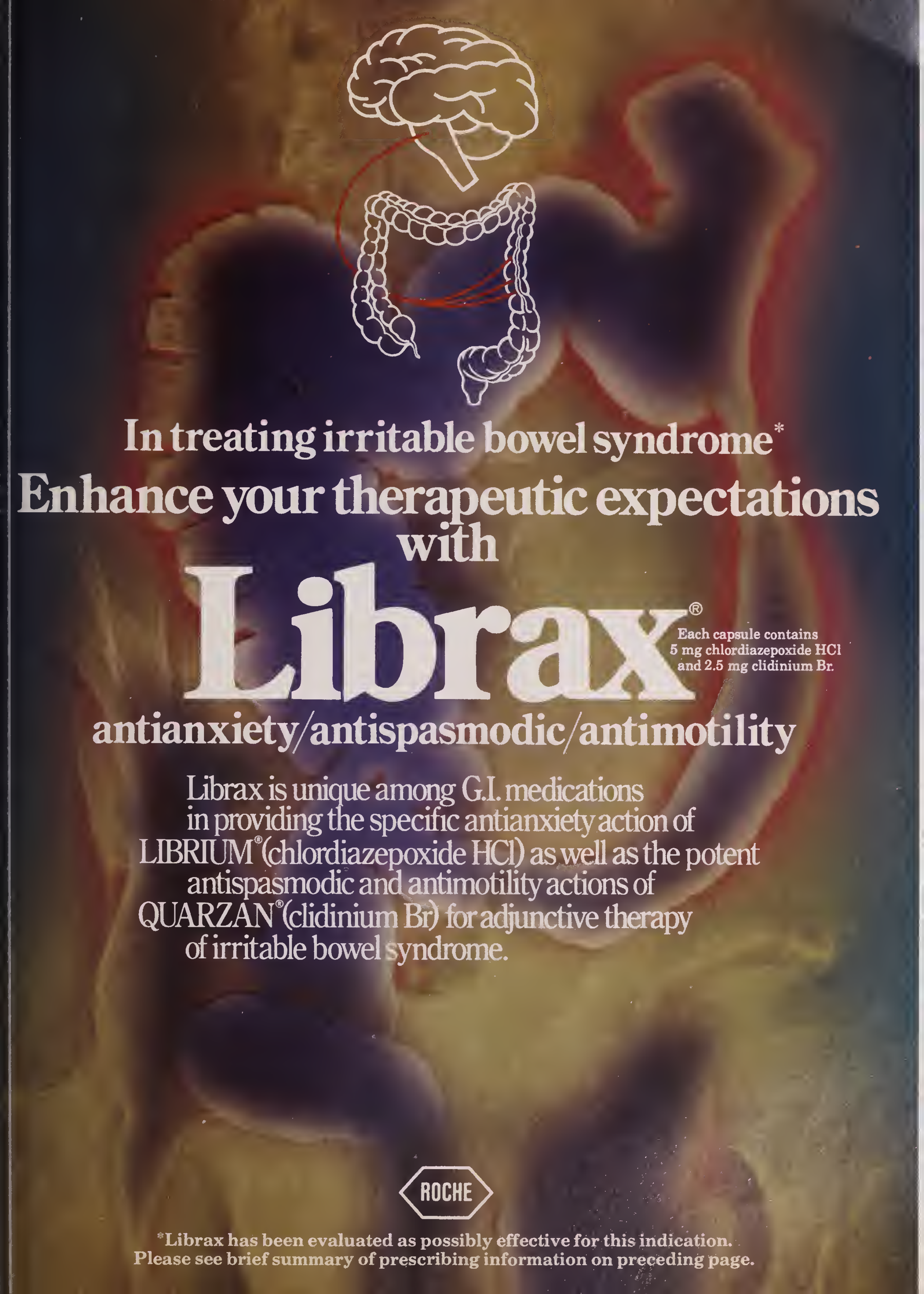
***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

ROCHE
Roche Products Inc.
Manati, Puerto Rico 00701



In treating irritable bowel syndrome*

Enhance your therapeutic expectations with

Librax®

Each capsule contains
5 mg chlordiazepoxide HCl
and 2.5 mg clidinium Br.

antianxiety/antispasmodic/antimotility

Librax is unique among G.I. medications in providing the specific antianxiety action of LIBRIUM® (chlordiazepoxide HCl) as well as the potent antispasmodic and antimotility actions of QUARZAN® (clidinium Br) for adjunctive therapy of irritable bowel syndrome.

ROCHE

*Librax has been evaluated as possibly effective for this indication.
Please see brief summary of prescribing information on preceding page.

EMPIRIN® COMPOUND
c̄ CODEINE

Each tablet contains: aspirin, 227 mg; phenacetin, 162 mg, and caffeine, 32 mg; plus codeine phosphate in one of the following strengths: #4—60 mg (gr 1); #3—30 mg (gr ½); #2—15 mg (gr ¼); and #1—7.5 mg (gr ⅛) (Warning—may be habit forming) CIII

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

'Singing Doctors' to Appear at Auxiliary Benefit Auction for AMA-ERF/MSMF

The first Annual Benefit Auction for the AMA-ERF and MSMF (MSMA student loan fund) will be held for all MSMA and Auxiliary members, guests and friends on the evening of Thursday, April 19 during the Annual Convention at the Chase-Park Plaza Hotel in St. Louis.

The auction, which will be sponsored by the MSMA Auxiliary, will begin at 7 PM in the Chase Club. A cash bar will be available at 6:30 PM and snacks and hors d'oeuvres will be served during the event.

Mrs. A. J. Campbell, Auxiliary president, said that she anticipates a large, enthusiastic attendance. She suggests that the cooperation and interest of MSMA members in donating items and attending the auction should enable both the MSMA and Auxiliary to substantially increase Missouri's contributions to both funds.

'Singing Doctors' to Appear

Adding to the fun of the evening will be the nationally-famous "Singing Doctors of Springfield" who will serve as auctioneers. They also are donating several of their own most popular albums to add to the attractive "auction fare."

Mrs. Donald C. Sanders, the Auxiliary auction coordinator, said the Auxiliary also expects to feature a "big name" personality.

Items to Be Donated

Singing Doctors of Springfield

As of February 26, numerous valuable and unusual collector's items have been volunteered. They include an antique gun, a painting with an antique frame, limited edition prints, a vacation in a condominium or private home at the Lake of the Ozarks and a vacation in a private home in Florida.

The Auxiliary is asking MSMA and Auxiliary members for donations such as antiques, paintings, objets d'art, photographic art and craft items and homemade food items. Interested members are encouraged to use their own ingenuity in this regard.

Members who wish to donate items should notify Mrs. Donald C. Sanders (200 Avila Circle, Kansas City 64114) or their county auxiliary presidents by April 1.

Donations will be received in the Chase Club after 1 PM on April 19. Please attach a description of the item for the auctioneer.

Women Physicians Invited to AMWA Meeting in St. Louis

The American Medical Women's Association will convene for its second Missouri General Assembly of women physicians on April 19 at the Chase-Park Plaza Hotel in St. Louis.

A highlight of the program will be the presentation of her expert observations of the child and family in China by Dr. Pearl Ulett, a child psychiatrist practicing in St. Louis. Dr. Ulett has made numerous trips to China, where she was born and raised.

All medical women in the St. Louis Metropolitan Medical Society and in Missouri are invited to attend the meeting. To make reservations for the 6:30 PM reception and dinner in the Stockholm Room of the hotel, please mail your check for $12.50 (per plate) to Meredith J. Payne, M.D., 7314 Westmoreland Place, St. Louis 63130 or to Esther Winkleman, M.D., State Director, 6400 Prospect, Kansas City 64132.

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: Alta Bingham

April 5-7	Perspectives in Medicine
April 20-21	The Long Weekend: Neurology/Renal Diseases
May 3-5	Seminar: Update in Obstetrics and Gynecology
May 17-18	Surgical Problems—Old and New
June 7-8	Symposium: Physical Fitness

University of Kansas College of Health Sciences
Division of Continuing Education
Rainbow at Olathe Blvd., Kansas City, Kan. 66103
(913) 588-7130

March 29-30	Sexuality of the Handicapped
April 2-3	Ophthalmology: Ophthalmic Plastic Surgery
April 6-8	Anesthesiology (Crown Center Hotel, Kansas City)
April 23-24	Noninvasive Cardiac Diagnosis
April 25-26	Family Practice (Radisson-Muehlebach, Kansas City)
April 27	Infectious Diseases (Radisson-Muehlebach, Kansas City)

Missouri Chapter, American College of Surgeons
Box 1268, Columbia 65205
(314) 449-4518

June 22-23	Annual Professional Meeting (Alameda Plaza, Kansas City)

St. John's Mercy Medical Center
615 S. New Ballas Rd., St. Louis 63141
Contact: James G. Blythe, M.D., Chairman, Dept. of Obstetrics and Gynecology

May 10-11	11th Annual Matt Weis Symposium — Surgical Techniques in Obstetrics and Gynecology

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
Contact: Loretta Giacoletto

March-May	Internal Medicine Review (Weekly, day TBA) (Steinbert Auditorium, The Jewish Hospital)
March 29-30	Pediatric Neurology: Recent Advances in Diagnosis (Barnes Hospital Complex)
April 19-20	Recent Advances in the Diagnosis and Treatment of Hyperlipidemias
April 23-24	Developmental Deviations in Children and Adolescents
April 26-27	Sixth Annual Symposium on Obstetrics and Gynecology
May 2-4	Washington University Medical Center Alumni Reunion
May 10-12	Neuromuscular Diseases (Breckenridge Pavilion Inn, 1 South Broadway)
May 31	Newborn Metabolic Problems
Nov. 9-11	Sixth Annual Symposium: Anesthesia and the Geriatric Patient

American College of Physicians
Contact: Thomas W. Burns, M.D., F.A.C.P., University of Missouri, School of Medicine
Columbia 65201

March 29-31	Missouri Regional Meeting (Columbia)

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 454-2291
Contact: Ronald G. Evens, M.D.

April 9	City-Wide Radiology Conference
May 14	City-Wide Radiology Conference: Radiology of the Temporomandibular Joint

Greater Kansas City Radiological Society
Contact: G. David Dixon, M.D, President-Secretary
(816) 932-2550

March 21	4 PM — The Radiology of Renal Vascular Hypertension — An Overview (Spencer Library) 6:30 PM — Differential Diagnosis of Some Kidney Lesions Not Diagnosable by CT or Ultrasound (Alameda Plaza Hotel)
April 18	Radiological Special Procedures

University of Missouri-Columbia
M-175 Medical Center, Columbia 65201
(314) 882-2256
Contact: William Bradshaw, M.D., Director

April 9-10	25th Annual Urology Seminar (Crown Center Hotel, Kansas City)

St. Joseph Hospital
3rd St. and First Capitol Dr., St. Charles 63301
Contact: Gerald J. Duling, M.D., Medical Director

March 27	Duodenal Fistula
April 5	Tumor Board
April 10	Echocardiography: Clinical Applications and Syndromes
April 10	Pathologist's Seminar

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: Erich W. Pollak, M.D., F.A.C.S., Director of Surgical Education

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds
First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds

American College of Physicians
Contact: Thomas W. Burns, M.D., F.A.C.P., University of Missouri, School of Medicine, Columbia 65201

March 29-31	Missouri Regional Meeting (Columbia)

Mercy-Baptist Eye Seminars
615 S. New Ballas Rd., St. Louis 63141
Contact: Richard B. Oglesby, M.D.

May 13	Eighth Eye Seminar — Contact Lenses: Present and Future

SERVING YOU IN MISSOURI

MUNNS
MEDICAL
SUPPLY

9202 Barton
Overland Park, Ks 66214
913-492-5820

635 Hanley Ind. Ct.
St. Louis, Mo. 63144
314-645-0300

in Brief

A summary of AMA, medical & health news

American Medical Association / 535 North Dearborn Street / Chicago, Illinois 60610 / Phone (312) 527-1500 / TWX 910-221-0300

REDUCTIONS IN FEDERAL FUNDING for human services programs, biomedical research and medical education in President Carter's proposed 1980 budget were criticized by the AMA. The President recommended $5.5 million less for the Maternal and Child Health Care program in fiscal year 1980 than in the current year's appropriation of $380.5 million. The AMA also pointed to a lack of federal support for such activities as the Voluntary Effort and PSROs and to the continuing fraud and waste in federal programs. Key programs, which have already been badly eroded by inflation, must, at the very least, be maintained, the AMA said. The Association urged that more attention be paid to the spiraling cost of federal regulation and its inflationary effect on the budget.

DRUG DISTRIBUTION should be governed by the physician's decision in all cases, after weighing all factors involved, including cost, said AMA Board Chairman Robert B. Hunter, M.D., in commenting on a model state law proposed by HEW and FTC. The proposal would allow a pharmacist to substitute generic drugs for brand-name drugs unless the physician prohibits it. Dr. Hunter noted that, although the FDA monitors standards of drug strength, quality and purity and is developing a program to monitor bioavailability, there are no current controls to assure that all inert ingredients of generic drugs are exactly the same and to assure patient compliance with substitution. He pointed out that some formulators may wish to exceed FDA minimum standards and that physicians may wish to prescribe by brand to guarantee expected therapeutic results.

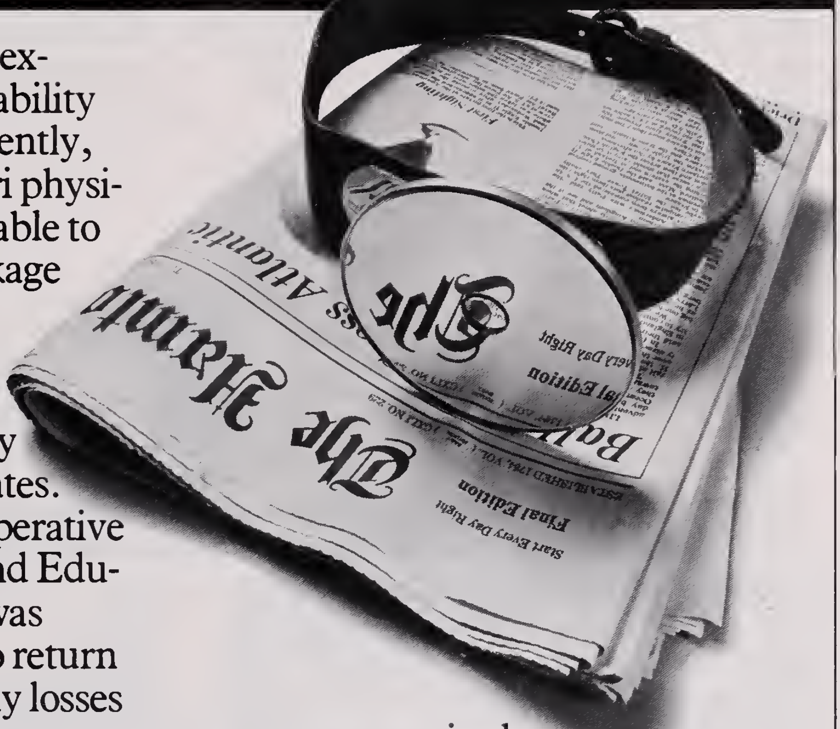
THE 1979 NATIONAL MEDICOLEGAL symposium will be held on March 8-11 in Las Vegas. This forum is sponsored jointly by the AMA and the American Bar Association to assist physicians and lawyers in serving the public and to stimulate cooperative action between the two professions. For further information contact the Office of General Counsel, AMA Headquarters.

IN VITRO FERTILIZATION is ethical, the AMA told HEW's Ethics Advisory Board in a statement that also urged research on techniques "to assist those who wish to bear children but are presently unable to do so." At the 1978 Interim Meeting, the House adopted a resolution stating that "embryo transfer of ova fertilized by sperm involving husband and wife is ethical — with their informed consent of the various medical and legal components" — and that "experimentation in the field of in vitro fertilization of human sperm and ova is ethical." The Ethics Advisory Board is holding hearings nationwide to determine whether federal financial support for such experimentation is warranted.

THE AMA WILL PARTICIPATE in the National Health Council's series of eight regional meetings on health promotion and disease prevention to be held this year. The two-day meetings, to be known as Regional Forums on Community Health Promotion, will be tailored to a particular situation in each area. The program is financed by a $480,000 grant from HEW. For further information contact the National Health Council, 1740 Broadway, New York, N. Y., 10019.

PHYSICIANS SHOULD DISCOURAGE cigaret smoking by personal example and by advising patients on its health hazards, the AMA urged. Remarking on the Surgeon General's recent 1,200 page report that links smoking to cancer and other chronic diseases, the AMA stated it has long recognized the well-defined hazards of smoking and the significant threat tobacco smoke poses to smokers and nonsmokers alike. The Association added that the known psychological component of smoking suggests that efforts be made to dissuade the depiction in the media of smoking as a norm of American culture. The AMA is continuing its public education campaign on smoking hazards.

ÆTNA HAS GOOD NEWS FOR MISSOURI PHYSICIANS.



Ætna Life & Casualty is expanding its Professional Liability Program in Missouri. Currently, we insure over 500 Missouri physicians and are pleased to be able to make this outstanding package available to more.

Put our experience to work for you. Ætna has instituted professional liability programs in many other states. One special feature is a cooperative program of Loss Control and Education. Where experience was favorable, Ætna was able to return premiums not needed to pay losses and expenses. We're now introducing this valuable feature in Missouri.

By working with Ætna, Missouri physicians help control the costs of their premiums by controlling their losses. At the same time receiving the necessary coverages required by today's medical realities.

All together, this adds up to good news for Missouri physicians. For details, contact your local Ætna agent or return the coupon below.

Ætna
LIFE & CASUALTY

Ætna Professional Liability Program for Missouri Physicians.
Without obligation, I'd like to know more about this Program.

Name ______________________________

Address ______________________________

City ____________________ State ________ Zip ________

The Ætna Casualty and Surety Company

The Standard Fire Insurance Company

Write to: William C. Dvorak, Manager
Ætna Life & Casualty
940 West Port Plaza
Suite 450
St. Louis, MO 63141

or

Robert S. Johnson, Manager
Ætna Life & Casualty
Commerce Tower Building
911 Main Street
Kansas City, MO 64105

WHY SHOULD A PHYSICIAN BE CONCERNED ABOUT HOSPITAL MANAGEMENT?

Because we think it affects your patient's care.

Employee confidence in hospital management improves morale and attitude: two major prescriptions in the care your patients receive.

Shared Service Systems, a non-profit organization of over 90 health care institutions in the Midwest, can provide complete management for your facility including a highly trained administrator and back-up support if and when required.

At Shared Service Systems, our management philosophy is to provide effective modern management to your hospital so that your patients will continue to receive local, cost effective health services.

We thought you should know about us.

for more information contact

SHARED SERVICE SYSTEMS
1725 So. 20th Street
Omaha, Nebraska 68108
or Phone: (402) 346-9008

Something Missing?

Keeping Patients Comfortable . . .

When your patient is most relaxed . . . you are most effective.

Patient comfort, along with your comfort, are prime considerations in this examination table.

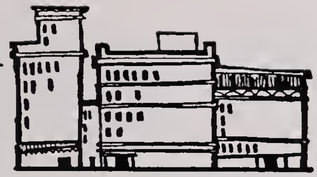
Places patients in the positions best for your work, with least discomfort for you.

Whether you are setting up your first office, or are ready to re-equip . . . whether you lease or buy, with time plans available . . . let Goetze-Niemer's helpful professionals work with you.

GOETZE-NIEMER CO.

- P.O. Box 136—1701 Brooklyn
  Kansas City, MO 64141
  Phone: 816-231-1900
- P.O. Box 187—211 No. 8th
  St. Joseph, MO 64502
  Phone: 816-279-0804
- 2611 West Mill St.
  Springfield, MO 65802
  Phone: 417-865-6511
- Frisco Building
  Joplin, MO 64801
  Phone: 417-624-1040

HOSPITAL AND SURGICAL SUPPLIES—SINCE 1884



NEWS
From the Medical Schools

UNIVERSITY OF MISSOURI-COLUMBIA

Dr. Daniel H. Winship has been appointed chief of medical services at the Harry S. Truman VA Medical Center. He also is professor of medicine in the School of Medicine and has been on the VA staff since 1974.

After receiving his M.D. degree from the University of Texas, Dr. Winship served an internship at Ochsner Foundation Clinic and a residency at the University of Utah College of Medicine. He served a fellowship in gastroenterology at Yale University and has been chief of that service at the University of Missouri.

R. Adron Harris, Ph.D., an assistant professor of pharmacology, has been awarded a three-year $269,000 research grant by the Veterans Administration to study the basic cause of alcoholism. He is one of ten U.S scientists to be included in the VA's multimillion dollar assault on alcoholism, a condition that affects more than two million veterans and an equally large number of family members.

Friedham Schroeder, Ph.D., an assistant professor of pharmacology, will collaborate with Dr. Harris. His experiments will determine how alcohol intoxication and withdrawal affect the structure and function of brain membranes.

Dr. Harris's research, to be conducted at the VA Medical Center, will define the membrane effects of alcohol which appear to be responsible for many of the pharmacological and pathological effects of the drug.

A CBS television news crew filmed a documentary on the continuous ambulatory peritoneal dialysis program at the Medical Center early in February and also visited two patients in their homes in North Missouri.

Dr. Constantine S. Anast, professor of child health, has accepted a position as professor of pediatrics at Harvard Medical School and Boston Children's Hospital.

Dr. Anast is noted for his research in calcium and bone metabolism and will continue his research at Harvard, where he will be in charge of the school's training program for postdoctoral fellows in pediatric endocrinology.

Dr. Anast has been a member of the School of Medicine faculty since February, 1956, the year the school moved into new facilities at the University Medical Center. He served as associate chief of staff for several years at the Harry S. Truman Veterans Administration Hospital.

ST. LOUIS UNIVERSITY

William B. Mill, M.D., has been appointed chairman of the Department of Radiation-Oncology, effective July 1.

Dr. Mill, who received his M.D. degree from the University of Tennessee College of Medicine in 1962, has held the position of assistant professor of radiology at Washington University's Mallinckrodt Institute of Radiology for seven years.

Dr. Mill's former clinical appointments include assistant radiologist, Barnes Hospital, St. Louis and assistant director, Department of Radiation Therapy, Cox Medical Center, Springfield. His publications have centered on his subspecialties, which are malignant lymphoma and multiple myeloma.

Thomas C. Westfall, Ph.D., has been appointed chairman of the Department of Pharmacology, effective July 1.

Dr. Westfall now serves as professor and director of graduate studies for the Department of Pharmacology at the University of Virginia School of Medicine. He received his doctorate degree in pharmacology from West Virginia University in 1962.

The author of more than 40 publications, Dr. Westfall has been a visiting faculty scholar for the Group of Biochemical Neuropharmacology, Laboratory of Molecular Biology, College of France in Paris. He has lectured at universities in Finland, West Germany, Sweden and across the United States.

David Lagunoff, M.D., has been appointed chairman of the Department of Pathology, effective July 1, 1979.

Dr. Lagunoff's research interests lie in the control of mast cell secretion, the process by which histamine is released from the mast cell.

Dr. Lagunoff is now professor of pathology at the University of Washington, Seattle. He is on the editorial board of Laboratory Investigation and was a consultant to the Pathology Study Section A, National Institutes of Health, from 1969 to 1973. He currently serves on the Cellular and Molecular Basis of Disease Review Committee of the National Institute of General Medical Sciences. He is the author of more than 80 publications.

Govindaswamy G. Chinnadurai, Ph.D., assistant professor of molecular virology, has been awarded the American Heart Association's Established Investigatorship Award for his study of adenoviruses which may cause cancer.

Dr. Chinnadurai is the first faculty member at the University to receive this five-year grant which provides a maximum of $140,000. The award is given by the American Heart Association to assist physicians and scientists up to 40 years of age to develop in careers of research in academic medicine and biology.

Recipients are expected to devote full time to research and to clinical and ancillary activities directly related to research. Dr. Chinnadurai's work will include the study of how some adenoviruses cause cancer and how human cells regulate gene activity.

Dr. Chinnadurai, who also holds grants for his cancer research from the National Science Foundation and the Missouri Cancer Programs, is one of three faculty members within the Department of Molecular Virology to hold career development awards. *Maurice Green*, Ph.D., director, Institute for Molecular Virology, holds a Lifetime Career Research Award from the National Institute of Allergies and Infectious Diseases and *Duane P. Grandgenett*, Ph.D., associate professor of molecular virology, holds a five-year faculty career development award from the American Cancer Society.

You have two chances;
One of getting the germ
And one of not.
And if you get the germ,
You have two chances;
One of getting the disease
And one of not.
And if you get the disease,
You have two chances;
One of dying
And one of not.
And if you die—
Well, you still have two chances.
—ANONYMOUS

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy*: Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

When you're good people recognize you.
Highly effective
Single-dose convenience
Non-staining
Economical
Pleasant tasting
a drug of choice in pinworm infections

Antiminth®
(pyrantel pamoate)
equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION

Please see brief summary of prescribing information on facing page.

©1977 LONE RANGER T.V., INC.

A reminder

ZYLOPRIM®
(allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

INDICATIONS AND USE: This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim® (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

CONTRAINDICATIONS: Use in children with the exception of those with hyperuricemia secondary to malignancy The drug should not be employed in nursing mothers.

Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.

WARNINGS: ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy particularly in patients with pre-existing liver disease

Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

In patients receiving Purinethol® (mercaptopurine) or Imuran® (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

Usage in Pregnancy and Women of Childbearing Age. Zyloprim® (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

PRECAUTIONS: Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or subnormal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

ADVERSE REACTIONS:

Dermatologic: Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.
Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.
A few cases of alopecia with and without accompanying dermatitis have been reported.
In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

Gastrointestinal: Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

Vascular: There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angiitis which have led to irreversible hepatotoxicity and death.

Hematopoietic: Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim® (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

Neurologic: There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

Ophthalmic: There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

Drug Idiosyncrasy: Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

OVERDOSAGE: Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

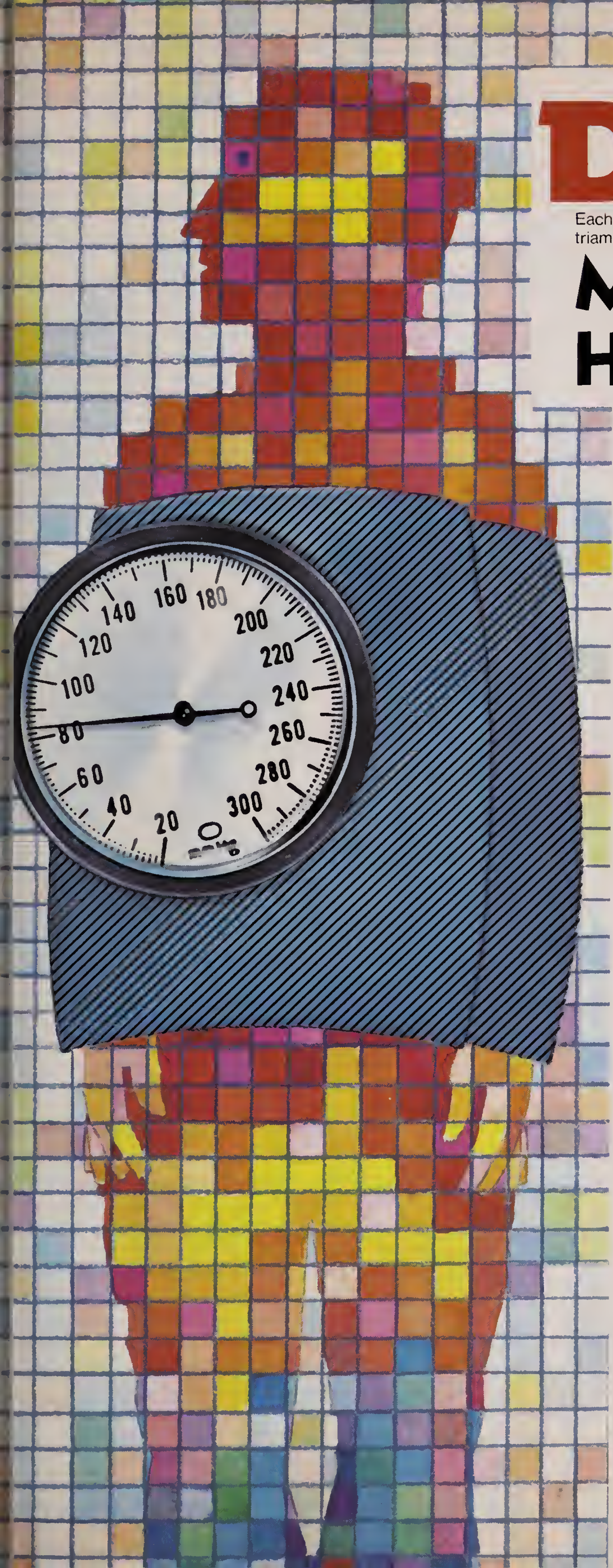
HOW SUPPLIED: 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709



Dyazide®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Makes Sense in Hypertension*

Before prescribing, see complete prescribing information in SK&F Co. literature or *PDR*. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs

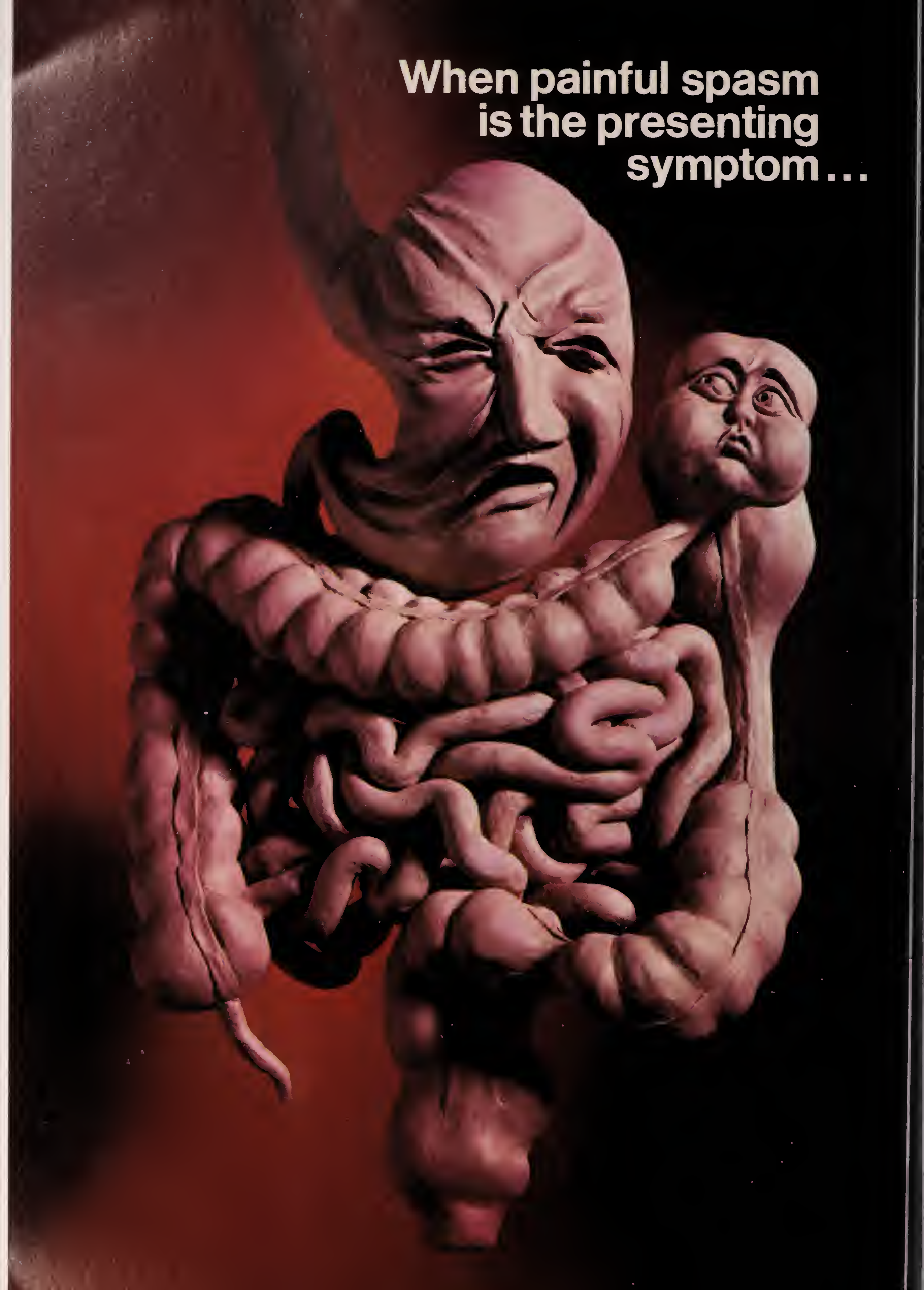
Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used Hyperkalemia can occur, and has been associated with cardiac irregularities It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency Periodically, serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk If their use is essential, the patient should stop nursing Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K+ frequently; both can cause K+ retention and elevated serum K+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
a SmithKline company
Carolina, P.R. 00630


When painful spasm
is the presenting
symptom...

in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

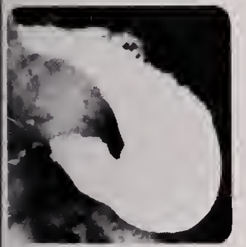
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

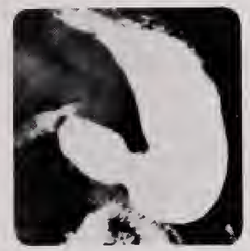
Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS
Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia, nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg. capsule and syrup: *Adults*: 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children*: 1 capsule or teaspoonful syrup three or four times daily. *Infants*: ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults*: 1 tablet three or four times daily. Bentyl Injection: *Adults*: 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1978

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Merrell

MERRELL NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215 U.S.A.

New Members

C. David Akin, M.D., 1515 W. Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Akin is a native of Joplin, received his preliminary education at Kansas State College and his M.D. degree at Kansas University in 1973. He specializes in internal medicine and cardiology.

Narinder S. Arora, M.D., State Chest Hospital, Mt. Vernon 65712, has become a member of Ozarks County Medical Society. Dr. Arora is a native of India, received his preliminary education at D.A.V. College and his M.D. degree at Medical College Punjab University in 1971. He specializes in internal medicine and pulmonary diseases.

George M. Austin, M.D., 1515 W. Truman Rd., Suite 404, Independence 64050, has become a member of Jackson County Medical Society. Dr. Austin is a native of Montgomery, Ala., received his preliminary education at Duke University and his M.D. degree at Indiana University in 1968. He specializes in urology.

Francis P. Badamo, M.D., 17221 E. 23rd, Independence 64057, has become a member of Jackson County Medical Society. Dr. Badamo is a native of Brooklyn, N. Y., received his preliminary education at Franklin and Marshall College and his M.D. degree at the University of Pennsylvania in 1970. He specializes in general surgery.

Arthur L. Brock, M.D., 1515 W. Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Brock is a native of Oklahoma City, Okla., received his preliminary education at Wichita State University and his M.D. degree at the University of Kansas in 1973. He specializes in internal medicine.

Craig Jay Brown, M.D., University of Missouri Medical Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Brown is a native of Fayetteville, Ark., received his preliminary education at the University of Arkansas and his M.D. degree at the University of Arkansas in 1977. He specializes in ophthalmology.

A. Steven Cain, M.D., 348 Rockhill Medical Bldg., 6700 Troost, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Cain is a native of Anniston, Ala., re-

ived his preliminary education at Auburn Uni-
rsity and his M.D. degree at the University of
labama in 1968. He specializes in cardiovascular
irgery.

Francis L. Edwards, M.D., Cassville 65625,
is become a member of Ozarks County Medical
ociety. Dr. Edwards is a native of Winfield,
an., received his preliminary education at Kan-
s State University and his M.D. degree at Kan-
s State University in 1944. He specializes in
neral practice.

Robert C. Fletcher, M.D., 112 Carondelet
edical Bldg., 1010 Carondelet Dr., Kansas
ity, 64114, has become a member of Jackson
ounty Medical Society. Dr. Fletcher is a native
Brooklyn, N. Y., received his preliminary edu-
tion at Tufts University and his M.D. degree at
ufts University in 1972. He specializes in
hthalmology.

Dante Ocampo Garrido, M.D., 315 N. 10th,
. Joseph 64506, has become a member of
uchanan County Medical Society. Dr. Garrido
a native of the Philippines, received his pre-
minary education at the University of Santo
omas and his M.D. degree at the University of
into Tomas in 1971. He specializes in neurology.

Thomas E. Geraghty, M.D., 2700 Hospital
r., Kansas City 64116, has become a member of
lay County Medical Society. Dr. Geraghty is a
tive of Rochester, Minn., received his prelimi-
ry education at Kansas University and his M.D.
gree at Kansas University in 1972. He spe-
alizes in plastic surgery.

Walt W. Grote, M.D., Star Rt. 1, Leopold
760, has become a member of Cape Girardeau
ounty Medical Society. Dr. Grote is a native of
orpus Christi, Tex., received his preliminary
lucation at Texas A & M University and his
.D. degree at the University of Texas in 1975.
e specializes in anesthesiology.

Michael Dale Hagen, M.D., 500-A Porter, Au-
ra 65605, has become a member of Ozarks
ounty Medical Society. Dr. Hagen is a native of
. Louis, received his preliminary education at
enison University and M.D. degree at the Uni-
rsity of Missouri in 1975. He specializes in fam-
y practice.

V. Carl Jelley, M.D., 1600 W. 40 Highway,
lue Springs 64015, has become a member of Jackson County Medical Society. Dr. Jelley is a native of Maryville, received his preliminary education at Johns Hopkins University and his M.D. degree at Northwestern University in 1969. He specializes in orthopedic surgery.

James C. King, M.D., 113 W. Hickory, Neosho 64850, has become a member of Ozarks County Medical Society. Dr. King is a native of Tulsa, Okla., received his preliminary education at the University of Tulsa and his M.D. degree at the University of Oklahoma in 1976. He specializes in family practice.

Jose R. Navato, M.D., 1505 W. Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Navato is a native of Manila, received his preliminary education at the University of the Philippines and his M.D. degree at the University of the Philippines in 1955. He specializes in psychiatry.

James Alan Roller, M.D., 2319 Broadway, Hannibal 63401, has become a member of Marion-Ralls-Shelby County Medical Society. Dr. Roller is a native of Hannibal, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1973. He specializes in dermatology.

Walter R. Ross, Jr., M.D., Suite 100, Westowne III, Liberty 64068, has become a member of Clay County Medical Society. Dr. Ross is a native of Philadelphia, Pa., received his preliminary education at the University of Kansas and his M.D. degree at Kansas University in 1973. He specializes in internal medicine.

Marc K. Taormina, M.D., 1621 N.E. Clubhouse Dr., Kansas City 64116, has become a member of Jackson County Medical Society. Dr. Taormina is a native of Kansas City, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1976. He specializes in internal medicine.

Michael C. Trueblood, M.D., 2327 Belleridge, Cape Girardeau 63701, has become a member of Cape Girardeau County Medical Society. Dr. Trueblood is a native of St. Louis, received his preliminary education at DePauw University and his M.D. degree at Vanderbilt University in 1973. He specializes in orthopaedic surgery.

FINANCIAL STATEMENT FOR THE YEAR 1978

LENNERTSON & COMPANY
CERTIFIED PUBLIC ACCOUNTANTS
ST. LOUIS, MISSOURI 63144

January 29, 1979

Missouri State Medical Association
113 Madison
Jefferson City, Missouri 65101

Gentlemen,

The balance sheet of Missouri State Medical Association, a non-profit Missouri corporation, has been examined as of December 31, 1978, and attached are the related statements of income and reserves and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion the aforementioned financial statements present fairly the financial position of Missouri State Medical Association at December 31, 1978, and the results of its operations and the changes in its financial position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Yours very truly,
LENNERTSON AND COMPANY

EXHIBIT A

Missouri State Medical Association Balance Sheet December 31, 1978

Assets		
Current Assets		
Central Trust Bank (Treasurer's Acct.)	$ 99,185.93	
Central Trust Bank (Secretary's Acct.)	136.99	
Boatmens Bank	7,629.74	
Petty Cash Fund	25.00	
Certificates of Deposit	280,000.00	
Total Current Assets		$ 386,977.66
Investments (Exhibit C-2)		
Corporate Bonds at Cost	$ 5,000.00	
Corporation Stocks at Cost	72,983.21	
North American Savings Account Due 12/20/79	40,079.52	
Wholly Owned Subsidiaries—Equity Investment	2,561,296.78	
Total		$2,679,359.51
Accounts Receivable		
Advertisers	$ 3,955.34	
Others	269.90	4,225.24
Dues Receivable—Exhibit D (See Reserve-Contra)		15,767.50
Fixed Assets (At Cost)		
Land	$ 26,000.00	
Building	136,892.24	
Furniture and Fixtures	74,032.76	
Total	$ 236,925.00	
Less Reserve for Depreciation	34,023.20	202,901.80
Advance for Travel Expense		1,193.34
		$3,290,425.05
Liabilities		
Current Liabilities		
Accounts Payable:		
Accrued Interest	$ 68,971.10	
Supplies and Expenses	12,221.75	
Due American Medical Association	3,285.00	
Due Mo. State Medical Foundation	10.00	
Due Missouri Medical Insurance Co.	47,355.02	
Total Current Liabilities		$ 131,842.87
Deferred Credit to Income (Advance Payments)		147,896.50
Reserve for Uncollected Dues (See Receivable)		15,767.50
Note Payable–Boatmens Bank		2,203,032.34
Subordinated Notes		404,169.94
Reserve for Future Activities—		
Balance 1/1/78	$ 440,513.22	
Loss on Sale of Securities	(21.36)	
Reinvestment of Permanent Investment Income	7,877.26	
M.S.M.I., Inc. Earned Surplus to 1/1/78	4,533.97	
Excess of expense over income—Exhibit B	(65,187.19)	387,715.90
		$3,290,425.05

EXHIBIT

Missouri State Medical Association Income Statement for the Year 1978

Particulars	*General Activities*	*Journal Publication*	*Total*
Dues Received (including $3.00 per member annually for the Journal)	$491,446.50	$ 13,611.00	$505,057
Rentals—Annual Session Exhibit Space	9,900.00		9,900.
Annual Session Contributions	1,350.00		1,350
Subscriptions to the Journal—Nonmembers		3,133.62	3,133
Advertising Space—The Journal		31,697.19	31,697
Investments—Interest and Dividends	38,791.41		38,791
Collection Fees on AMA Dues	5,135.15		5,135
Reimbursed Fees for Services	6,600.00		6,600
Net Profit-Wholly owned subsidiaries Year 1978			
Missouri Medical Insurance Co.	44,248.93		44,248
MSMI, Inc.	22,513.88		22,513
Total Income	$619,985.87	$ 48,441.81	$668,427
Expenses			
Salaries	$162,079.31	$ 18,365.77	$180,445.
The Journal—Paper, Printing, Etc.		63,036.54	63,036.
Consultation Fee	4,000.00		4,000.
Commission on Journal Advertising		4,848.03	4,848.
Commission and Meeting Expenses	103,948.62		103,948.
Custodian Fees—Investments	329.72		329.
Depreciation	5,205.16	853.57	6,058.
Dues and Subscriptions	1,141.45		1,141.
Employees' Pension Plan Contribution	16,797.00	3,270.51	20,067.
Equipment Purchases, Rentals, and Repairs in lieu of Depreciation	3,501.96	351.62	3,853
Insurance—General	2,135.00		2,135
Insurance—Blue Cross	5,392.85	545.58	5,938
Interest Expense	219,298.66		219,298.
MMPAC—Administrative Expenses	4,740.15		4,740
Membership—Data Processing	13,142.06		13,142
Occupancy Expense	4,950.74	813.98	5,764
Postage	9,411.01		9,411
Professional Fees	20,999.89	1,261.32	22,261
Public Relations Survey	20,778.39		20,778
Reinvestment Fixed Income	7,877.26		7,877
Stationery, Printing and Office Supplies	5,822.91		5,822
Student Awards	300.00		300
Taxes—Payroll	9,185.21	1,165.20	10,350
Taxes—Real Estate	477.34		477
Telephone and Telegraph	9,531.82	964.33	10,496
Traveling Expenses—Executive Secretary and Assistants	7,091.91		7,091
Total Expenses	$638,138.42	$ 95,476.45	$733,614
Excess of Expenses over Income	$ (18,152.55)	$(47,034.64)	$ 65,187

Exhibit C-1

Missouri State Medical Association
Statement of Commissions and Meeting Expenses for the Year 1978

nual Session		$ 43,527.71
uncil		11,239.86
legates to AMA		23,879.01
hlic Affairs		11,092.10
oman's Auxiliary		4,385.61
mmissions:		
Commission on Medical Economics, Third Party Medicine, and Governmental Relations	$ 473.19	
Commission on Continuing Education and Health Manpower	5,760.86	
Commission on Medical-Legal Affairs	87.46	
Committee on Interspecialty Medicine	78.35	
Committee on Planning	180.55	
Committee on Voluntary Health Agencies	51.48	
Committee on Impaired Physicians	1,349.38	
Committee on Medical Affairs	226.79	
Committee on Socio Economics	1,616.27	9,824.33
Total		$103,948.62

Exhibit C-2

Statement of Investments December 31, 1978

scription	
cific Gas and Electric Co., 4½% due 6/1/90	$ 5,000.00
hns-Manville 200 shares	5,582.34
ntral and Southwest Corp. 400 shares	6,345.62
nerican Home Products Corp. 150 shares	3,006.88
aft 90 shares	4,158.25
ker Oil Co. 330 shares	5,940.09
terco 420 shares	12,407.63
P. Morgan and Co. 244 shares	5,161.93
ternational Tel. & Tel. Corp. 100 shares	6,940.89
nkamerican Corp. 800 shares	13,751.15
T. & T. 65 shares	4,125.42
ternational Paper 145 shares	5,563.01
Total Cost (Market Value $92,173.50)	77,983.21
orth American Savings Account, 6% due 12/20/79	40,079.52
holly owned Subsidiaries:	
M.S.M.I. Inc.—Equity Investment	17,047.85
Missouri Medical Insurance Co.—Equity Investment	2,544,248.93
Total	$2,679,359.51

Exhibit D-1

Missouri State Medical Association
Dues Receivable and Membership by Societies
December 31, 1978

MEMBERSHIP

Societies	*Junior*	*Active*	*Honor*	*Total*	*Unpaid Dues*
ndrew		3		3	
ndrain		22	2	24	$ 250.00
rton		4	1	5	
oone	9	240	13	262	1,370.00
uchanan		96	18	114	250.00
utler-Wayne-Ripley		57	3	60	
allaway		11	4	15	
ape Girardeau		71	3	74	
hariton-Macon-Monroe-Randolph		20	6	26	125.00
lay	6	124	3	133	687.50
linton		3	1	4	
ole		65	6	71	125.00
ooper		5	1	6	
allas-Hickory-Polk-Dade		6	2	8	
unklin		20		20	250.00
ranklin-Gasconade-Warren		31	2	33	62.50
rand River		26	5	31	125.00
reene		256	30	286	
enry		5	4	9	
oward		5		5	
ckson	13	934	157	1,104	1,312.50
sper		80	12	92	125.00
fferson		21	2	23	250.00
hnson		12	3	15	125.00
afayette-Ray		23	1	24	
ewis-Clark-Scotland		1		1	
arion-Ralls-Shelby		31	2	33	125.00
id Missouri		42	2	44	
iller		1	1	2	
ineral Area		34	3	37	375.00
oniteau		3		3	
ontgomery		1		1	
organ		4	1	5	
orth Central		2		2	
orthwest Missouri		20	1	21	
zark		37	8	45	225.00
emiscot		10		10	
Perry-Ste. Genevieve		15	2	17	125.00
Pettis		29	4	33	
Pike		9		9	
Platte		4		4	
St. Charles-Lincoln		62	2	64	375.00
St. Louis City	113	1,476	167	1,756	8,760.00
St. Louis County	16	509	55	580	250.00
Saline		10	2	12	
Semo		38	4	42	
South Central		19	1	20	125.00
Webster		2		2	
West Central		34	5	39	350.00
Totals	157	4,533	539	5,229	$15,767.50 (A)

(Continued in next column)

(A) Delinquent dues of members at December 31, 1978 carried at the request of local Societies. Other delinquent members were dropped from membership in accordance with the by-laws.

Exhibit E

Missouri State Medical Association
Statement of Source and Application of Funds
For the Year 1978

Funds Acquired			
Note Payable—Boatmens Bank		$2,500,000	
Less Repayments on Note		296,968	$2,203,032
Collections on Subordinated Notes			404,170
Increase in Deferred Credits to Income			142,727
M.S.M.I., Inc. Earned Surplus to 1/1/78			4,534
Reinvestment of permanent investment income			7,877
Sale of Security			24
Total Funds Acquired			$2,762,364
Funds Applied			
Excess of expenses over income for year	$65,187		
Less Depreciation (non-cash)	6,059	59,128	
Purchase of Investments		2,559,297	
Purchase of Fixed Assets		70,824	
Increase in Accounts Receivable		306	
Increase in Travel Advance		211	
Total Funds Applied			2,689,766
Balance—Increase in Working Capital			$ 72,598
Accounted for as follows:			
Increase in Cash			$ 56,160
Increase in Certificates of Deposit			140,000
Increase in Current Liabilities			(123,562)
Balance—Increase in Working Capital			$ 72,598

Missouri State Medical Association
Notes to Financial Statements
December 31, 1978

1. *Investments.* Permanent investments with a cost of $77,983.21 were confirmed by a statement from the custodian, Mercantile Trust Company. Equity investment in Missouri Medical Insurance Company is obtained from unaudited financial statements prepared by the company's employees.

2. *Building, Equipment, and Depreciation.* The building occupied by the Association with a cost of $136,892.24 will be depreciated over a useful life of 30 years and the furniture and fixtures in the amount of $74,032.76 has a 10 year useful life. Depreciation is computed on a straight line basis.

Purchase of small equipment, rentals and repairs for the year in the sum of $3,853.58 were charged to expense in lieu of depreciation.

3. *Dues and Assessments.* Membership dues and assessments are taken into income on a cash receipt basis whereas all other accounts are maintained on the accured basis. The following are the dues and assessments for each member in effect during the year 1978.

	Active	*Junior*
Journal	$ 3.00	$ 3.00
Association General Fund	112.00	7.00
Foundation Assessment	10.00	
Mo. State Medical Assn. Dues and Assessments	$125.00	$10.00
American Medical Association	250.00	35.00
Totals	$375.00	$45.00

4. *Notes Payable – Boatmens Bank.* The original loan is dated February 14, 1978 in the amount of $2,500,000 with a due date of February 14, 1981. Interest rate is 1% over prime and is secured by securities held by Mercantile Trust Company and 99.8% of the issued shares of Missouri Medical Insurance Company. Payments on the notes are determined by an increasing schedule from 70% to 90% of the collections made on the subordinated notes.

5. *Subordinated Notes.* The notes are issued without interest or maturity date and interest or repayment is at the discretion of the council of the Missouri State Medical Association, and the restrictions contained in the subordinated notes.

6. The Association has a contingent liability in the amount of $10,000 as a guarantor on bank loans payable by Missouri Health Data Corporation due in 1979.

FINANCIAL STATEMENT

MISSOURI STATE MEDICAL FOUNDATION DECEMBER 31, 1978

LENNERTSON & COMPANY
CERTIFIED PUBLIC ACCOUNTANTS
ST. LOUIS, MISSOURI 63144

January 29, 1979

Missouri State Medical Foundation
113 Madison
Jefferson City, Missouri 65101

Gentlemen,

The balance sheet of Missouri State Medical Foundation was examined as of December 31, 1978, and the related statements of support, revenue and expenses, and changes in fund balances for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned statements present fairly the assets and liabilities of Missouri State Medical Foundation at December 31, 1978, arising from cash transactions, and the revenues collected and expenditures made by it during the year then ended, on a basis consistent with that of the preceding year.

Yours very truly,
LENNERTSON AND COMPANY

EXHIBIT A

Missouri State Medical Foundation Balance Sheet (Cash Basis), December 31, 1978

Assets

Cash		
Checking Account	$ 94,377.86	
Savings Account	51,232.92	
Total Cash		$145,610.78
Loans Receivable from Medical Students	$686,915.43	
Less Reserve for Losses	15,742.76	671,172.67
		$816,783.45

Fund Reserve

Balance January 1, 1978		$759,491.81
Additions for the Year 1978		
Interest on Student Loans	$ 18,356.24	
Interest on Bank Deposits	2,498.45	
Contributions (detailed below)	5,422.39	
Assessment of Members, Active $10.00	43,920.00	70,197.08
		$829,688.89
Less Expenses for the Year 1978		
Administrative Services	$ 6,600.00	
Professional Fees	1,366.65	
Printing, Meeting and Miscellaneous	352.21	
Provision for Losses on Student Loans	4,586.58	12,905.44
		$816,783.45

Contributions

Corporate	$ 285.00
Tribute	10.00
Physicians	749.50
Others	4,377.89
Total Contributions	$5,422.39

Missouri State Medical Foundation Notes to Financial Statements December 31, 1978

1. *Income.* Accrued interest on outstanding loans at December 31, 1978 amounted to $44,580.26 and is not included in the loan balance in Exhibit A.

2. *Student Loans.* Summary of Loans Receivable.

Loans Receivable January 1, 1978	$675,269.38
Loans made during the year	74,450.00
	$749,719.38
Less Loan Repayments	60,672.52
	$689,046.86
Uncollectable Loans Charged Off	2,131.43
Loans Receivable December 31, 1978	$686,915.43

3. *Reserve for Losses.* This reserve is carried to offset uncollectable loans and to charge off student loan balances in the event of death of the borrower.

Component Society News

BUCHANAN COUNTY MEDICAL SOCIETY

Dr. Ben D. McCallister, Kansas City, presented the annual "Heart" program of the Buchanan County Medical Society. This annual event i February, national Heart Month, is presented i cooperation with the Missouri Heart Association

A cardiologist and staff member of St. Luke' Hospital, Dr. McCallister discussed "Rehabilitation in Myocardial Infarction Patients." He described rehabilitation programs for heart patient in the hospitals and rehabilitation program of th Kansas City YMCA.

Dr. McCallister noted that rehabilitation is team effort of the physician, nurses, paramedica personnel and the patient in his responsibility fo staying with the program. He was enthusiastic i his praise of the results attained by the YMC program which has special prescribed exercis programs and constant monitoring of these programs.

Dr. Allen I. Herman introduced Dr. McCallister. Dr. Carl K. Ness, president, presided at th meeting.

ROBERT R. STUBER, M.D., *Secretar*

In Memoriam

Frank Joseph Manganaro, M.D., 1520 S Brentwood, St. Louis 63144; a graduate o Creighton University School of Medicine, 1941 member of St. Louis City Medical Society; age 63 died Nov. 20, 1978.

Arch Joe Beatty, M.D., 917 McGee, Kansa City 64106; a graduate of the University of Tennessee, 1940; member of Jackson County Medica Society; age 63; died Dec. 20, 1978.

John McLeod, M.D., 9 East 67th, Kansas Cit 64113; a graduate of the University of Kansas 1927; member of Jackson County Medical Society; age 78; died Dec. 28, 1978.

Charles Harlow Isbell, M.D., 1515 Haze Ave., Carthage 64836; a graduate of the University of Kansas, 1934; member of Jasper Count Medical Society; age 71; died Jan. 4, 1979.

John H. Walters, M.D., 1027 Hickory Hil Dr., Columbia 65201; a graduate of Washingto University, 1950; member of Boone Count Medical Society; age 62; died Jan. 9, 1979.

INDEX TO ADVERTISERS

They Help Make Missouri Medicine *Possible*

etna Life & Casualty 171
eltone Electronics 120
urroughs Wellcome ..... Insert (166-167), Insert (174-175)
oetz-Niemer Co. 172
red S. James & Co. of Missouri, Inc. 130
li Lilly & Company 144
ead Johnson Pharmaceutical Division ..... Insert (134-135)
edical Defense Associates 129
edical Protective Company 128
erck Sharp & Dohme ..... Insert (126-127)
errell-National Laboratories ..... 126, Insert (126-127), Insert (174-175), 175, 176
MOMEDICO 118
Munns Medical Supply 169
Pfizer Laboratories 121
Purepac 131
PVO International 162
Roche Laboratories ..... 119, 166, Insert (166-167), 183, 184
Roerig ..... 174, Insert (174-175)
Shared Service Systems 172
Smith, Kline & French ..... Insert (174-175)
The Upjohn Company ..... Insert (126-127)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

VANTED — Position as Physician Assistant in/or around olumbia, Mo. Will graduate from an AMA-approved proram on Feb. 23, 1979. Clinical experience in plastic urgery, burns ER, medicine and family practice plus background in psychiatry. Please contact M. Hurst, c/o Skip eady, M3HS Stadium Blvd., Columbia, MO 64201.

NESTHETIST WANTED — Excellent opportunity for oard certified or Board eligible anesthetist to locate in ansas City, MO. Call 816-941-0030 between 7 AM and 3:30 M.

ULL-TIME EMERGENCY MEDICINE OPPORTUNITY — Jefferson City, Mo. at St. Mary's/Memorial Hospials. Congenial atmosphere. Work two days per week and arn $44,000+ annually. $5,000,000 malpractice coverage. end CV to Cecil Oakes, M.D., Emergency Department, 10 West Elm, Jefferson City, MO 65101 or call collect 14-878-2280.

RIMARY CARE PHYSICIAN'S ASSISTANT — NCCPA oard certified. Graduate of two-year AMA-approved proram. Seeking position with family practitioner for primary are health clinic. Main interests include pediatrics, OB/YN and geriatrics. Would consider specialty practice. H. Misuraca, PA-C, 5019 Murdoch Ave., St. Louis, Mo. 3109. Phone (314) 351-7632.

SURGEON TO JOIN GROUP PRACTICE — 31-year-old University trained, Board eligible surgeon wishes to join a group practice. Will have completed three years of clinical fellowship (post-residency) in cancer surgery in June, 1979. Write to CA-BOX 452, Missouri State Medical Association, 113 Madison, Jefferson City, MO 65102.

EMERGENCY ROOM PHYSICIANS — University affiliated hospital in St. Louis County in need of physicians to work in the Emergency Room between the house hours of 7 AM and 10 PM week days. Reply to CA-Box 453, Missouri State Medical Association, 113 Madison, Jefferson City, MO 65102.

AVAILABLE FOR LOCUM TENENS — In Missouri during March and April. Board certified in family practice and allergy. Seventeen years private practice experience. Write to CA-BOX 451, Missouri State Medical Association, P.O. Box 1028, Jefferson City, Mo. 65102.

EMERGENCY MEDICINE PHYSICIAN — 500-bed St. Louis teaching hospital; comfortable patient volume, excellent physician backup. 42-hour/week; minimum guarantee plus profit sharing. Excellent Annual Income plus benefits. Contact Jim Cooper at (314) 878-2280 for details.

FAMILY PRACTICE — Solo Board Certified family practitioner is seeking a family practice associate in growing community 6 miles north of Kansas City International Airport. Contact, Carl M. Myers, M.D., Platte Medical Clinic, Platte City, Mo. 64079. (816) 431-2200.

NEEDED IMMEDIATELY

PHYSICIAN
$27,000-$35,000

DESCRIPTION: full time position for daily sick call diagnosis and treatment.
REQUIREMENTS: valid license to practice medicine and 3 years experience in *family practice.*

CONTACT

John Byrne, Health Care Director
Division of Corrections
P. O. Box 236 700 E. Capitol
Jefferson City, Missouri 65101
Phone 314-751-2389

The Division of Corrections is an Equal Opportunity Employer

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

The annual meeting of the Jackson County Medical Society was held on December 20 in the Society's auditorium at Municipal (General) Hospital. Some 200 members and guests turned out for the occasion. The reports indicated a highly successful year for Jackson County Medical Society. For the first time in the history of the organization, 100% of the membership dues were paid.

The Lafayette County Medical Society met in Higginsville at the home of Dr. W. A. Braecklein on the evening of December 27. The following officers were elected: president, Dr. C. T. Ryland, Lexington; president-elect, Dr. G. W. Fredendall, Lexington; secretary, Dr. W. E. Koppenbrink, Higginsville; and board of censors, Dr. E. M. Moore, Sr., Higginsville.

The Cape Girardeau County Medical Society met on December 12 at the Colonial Tavern in Cape Girardeau. Dr. D. H. Hope, president, presided. The following officers were elected: president, Dr. J. H. Cochran; vice-president, Dr. Frank W. Hall; secretary, Dr. C. A. W. Zimmermann; treasurer, Dr. M. H. Shelby; and censor, Dr. George W. Walker, all of Cape Girardeau.

TWENTY-FIVE YEARS AGO

New members of the faculty at the Missouri University School of Medicine are the following: *From Tulane University* — Dr. William A. Sodeman, professor and chairman of medicine; *from New York University* and *Washington University* — Dr. Hugh E. Stephenson, Jr., assistant professor of surgery; *from Ohio State University* — Dr. Herbert S. Goldberg, assistant professor of microbiology; *from St. Louis University* — F. Eugene Doenges, assistant instructor in anatomy and Dr. Arnold Funckes, instructor in biochemistry.

Carl V. Moore, M.D., will assume the post of dean of the Washington University School of Medicine in March, 1954. Forty-five years old, Dr. Moore received his M.D. degree at Washington University in 1932, joined the staff in 1938 an has been professor of medicine since 1946. A authority on hematology and nutrition, the ne dean is president of the American Society o Clinical Investigation for the year 1953-1954.

William B. McCuniff, M.D., notes the following:

"William H. Halsted, a chain smoker wh rolled his own cigarettes (Bob White tobacco an Cosmopolite papers) had his shirts in bundles o 50 sent to England to be laundered."

TEN YEARS AGO

The Lions Eye Bank in St. Louis was inaugurated on November 20 following the second Milton Robert Israel Memorial lecture. Dr. Richar B. Ogelsby, a senior instructor in ophthalmolog at the St. Louis University School of Medicine will direct the bank which is headquartered at th St. Louis University Hospitals.

The Honorable Durward G. Hall, M.D. member of Congress from Missouri, will be th speaker at the general luncheon on Saturda during the 111th MSMA Annual Session at th Chase-Park Plaza Hotel in St. Louis. Dr. Hall, Republican from Springfield, was elected to Congress in 1960 and reelected in 1962, 1964, 196 and 1968. His committee assignments in th House include Armed Services and Specia Committee on Organization of the House. Dr Hall received his M.D. degree at Rush Medica School, University of Chicago. He is an activ member of the Greene County Medical Societ and the Missouri State Medical Association. H served as a delegate to the American Medica Association.

Dr. George E. Gantner, Jr., associate professo of pathology at the St. Louis University School Medicine, has been appointed as St. Loui County's first chief medical examiner, the job tha was created in the county charter adopted b voters in April, 1968.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

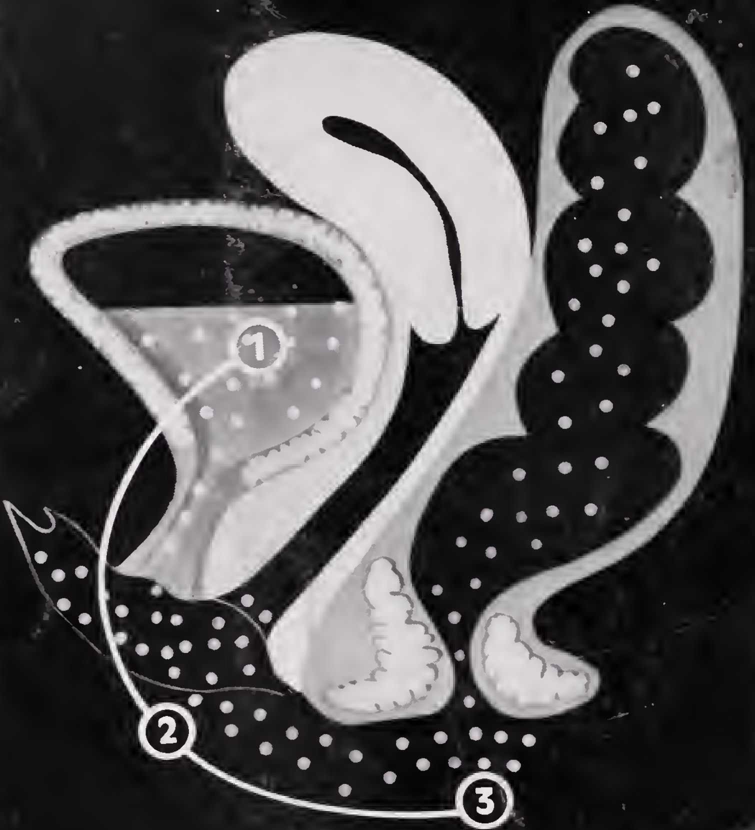
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see back cover.

College of Physicians
of Philadelphia, Library
19 South 22nd Street
Philadelphia 3, Pa. 19103

Her next attack of cystitis may require

the Bactrim™ 3-system counteratta



ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enter bacteriaceae* in the bowel without the emergence of re tant organisms. Thus, Bactrim reduces the risk of intro colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal trac

Please see reverse side for summary of product information.

Missouri Medicine

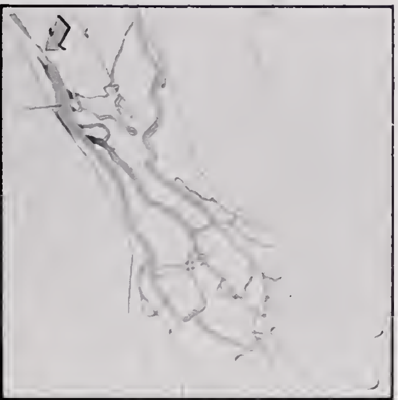
Vol. 76, No. 4 (ISSN 0026-6620) April, 1979

MDS

Laetrile
'Case Histories'

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
APR 27 1979

Editor's
Corner



Severe
Hand Venous
Hypertension
With
an End-to-Side
Radiocephalic
Fistula

Bedside Diagnosis
of
Deep Venous
Thrombosis

Physiologic
Delay
of
Menarche

MISSOURI STATE MEDICAL ASSOCIATION

Contents Page 191

MOMEDICO

YOUR PROFESSIONAL LIABILITY
INSURANCE COMPANY

prescription for protection!

Who knows the needs of a physician better than his peers? That's why MOMEDICO was formed **by** doctors **for** doctors.

MOMEDICO is owned by the Missouri State Medical Association and is a **stock** insurance company licensed and regulated under the laws applicable to insurance companies in the State of Missouri. MOMEDICO was formed to provide physician professional liability insurance to MSMA members at a reasonable price.

missouri medical insurance company
100 North Broadway
St. Louis, Missouri 63102

314-241-4774

COMPARE

MOMEDICO

Writes
- **occurrence form**
Professional liability insurance

Is adequately capitalized and
- **financially strong**

Purchase all
- **domestic reinsurance**
for protection

Is a
- **stock insurance company** domiciled in Missouri

Is
- **not assessable**

Has
- **no deductible** for claims

Provides
- **adequate limits**

Offers
- **premises liability**

Includes
- **personal injury coverage**

- May refund premiums with favorable underwriting experience

Editorial and Business Office, P O Box 1028, 113 Madison St., Jefferson City, Mo. 65102 Copyright 1979 by Missouri State Medical Association. All rights reserved Second Class postage paid a Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association 113 Madison Street, Jefferson City, Missouri 65102 Subscription Price: $15.00 Per Year, Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton Missouri.

contains no aspirin

tablets
Darvocet-N® 100 (IV)

100 mg. Darvon-N® (propoxyphene napsylate)
650 mg. acetaminophen

Lilly
700565

Additional information available to the profession on request from Eli Lilly and Company Indianapolis, Indiana 46206

Eli Lilly and Company, Inc.
Carolina, Puerto Rico 00630

PEDIATRIC INDICATIONS* FOR BACTRIM CONTINUE TO GROW...

URINARY TRACT INFECTIONS

PNEUMOCYSTIS CARINII PNEUMONITIS

SHIGELLOSIS

ACUTE OTITIS MEDIA

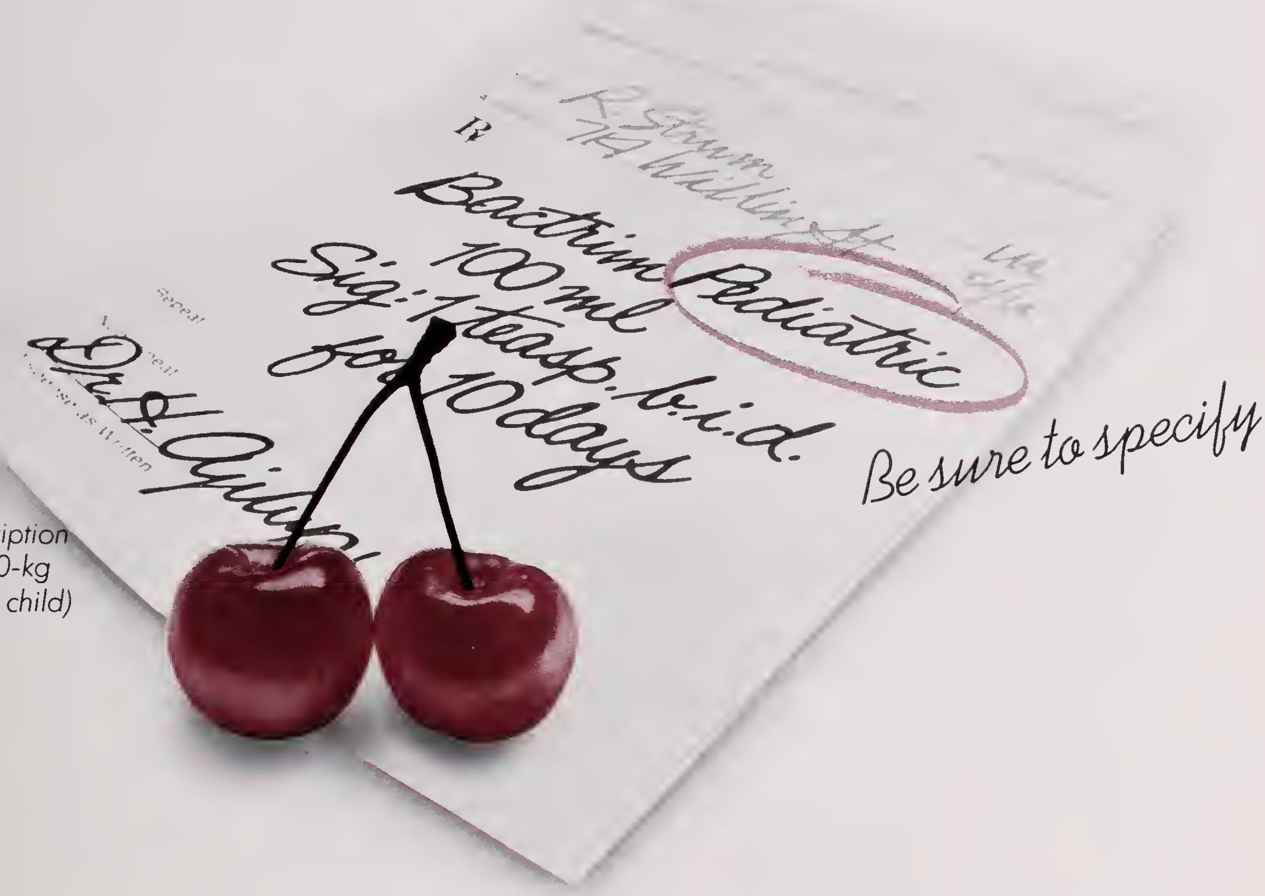
Involving susceptible organisms.

Please see Indications section in summary of product information on last page of this advertisement.

NOW...
ROCHE INTRODUCES

NEW
CHERRY FLAVOR
BACTRIM™
PEDIATRIC
ROCHE *SUSPENSION*

Each teaspoonful (5 ml) contains
40 mg trimethoprim and 200 mg sulfamethoxazole:


R
Bactrim Pediatric
100 ml
Sig: 1 teasp. b.i.d.
for 10 days
Be sure to specify

(Prescription
or a 10-kg
22-lb] child)

ESPECIALLY FLAVORED
*FOR CHILDREN**

Also available: The original fruit-licorice flavor to be prescribed as "Bactrim Suspension." The same active ingredient formulation—the difference is the flavor.

*Contraindicated in children under 2 months of age.

Please see summary of product information on following page.

BACTRIM® ROCHE

(trimethoprim and sulfamethoxazole)

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note* The increasing frequency of resistant organisms limits the usefulness of all antibacterials especially in these urinary tract infections

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. Limited clinical information presently available on effectiveness of treatment of otitis media with Bactrim when infection is due to ampicillin-resistant *Haemophilus influenzae*. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides pregnancy nursing mothers infants less than two months of age

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin Deaths from hypersensitivity reactions. agranulocytosis aplastic anemia and other blood dyscrasias have been associated with sulfonamides Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics primarily thiazides Sore throat fever. pallor purpura or jaundice may be early signs of serious blood disorders Frequent CBC s are recommended therapy should be discontinued if a significantly reduced count of any formed blood element is noted

Precautions: Use cautiously in patients with impaired renal or hepatic function possible folate deficiency. severe allergy or bronchial asthma In patients with glucose-6-phosphate dehydrogenase deficiency hemolysis frequently dose-related may occur During therapy. maintain adequate fluid intake and perform frequent urinalyses. with careful microscopic examination. and renal function tests. particularly where there is impaired renal function Bactrim may prolong prothrombin time in those receiving warfarin reassess coagulation time when administering Bactrim to these patients

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included. even if not reported with Bactrim *Blood dyscrasias* Agranulocytosis. aplastic anemia. megaloblastic anemia. thrombopenia. leukopenia, hemolytic anemia. purpura. hypoprothrombinemia and methemoglobinemia *Allergic reactions* Erythema multiforme. Stevens-Johnson syndrome generalized skin eruptions epidermal necrolysis. urticaria serum sickness. pruritus, exfoliative dermatitis. anaphylactoid reactions, periorbital edema conjunctival and scleral injection. photosensitization. arthralgia and allergic myocarditis *Gastrointestinal reactions* Glossitis. stomatitis. nausea. emesis. abdominal pains. hepatitis diarrhea and pancreatitis *CNS reactions* Headache, peripheral neuritis. mental depression. convulsions ataxia. hallucinations. tinnitus vertigo insomnia apathy fatigue. muscle weakness and nervousness *Miscellaneous reactions* Drug fever chills toxic nephrosis with oliguria and anuria periarteritis nodosa and L E phenomenon Due to certain chemical similarities to some goitrogens. diuretics (acetazolamide, thiazides) and oral hypoglycemic agents. sulfonamides have caused rare instances of goiter production. diuresis and hypoglycemia in patients cross-sensitivity with these agents may exist In rats. long-term therapy with sulfonamides has produced thyroid malignancies

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN. AND ACUTE OTITIS MEDIA IN CHILDREN

Adults Usual adult dosage for urinary tract infections—1 DS tablet (double strength) 2 tablets (single strength) or 4 teasp (20 ml) b i d for 10-14 days Use identical daily dosage for 5 days for shigellosis

Children Recommended dosage for children with urinary tract infections or acute otitis media—8 mg kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours in two divided doses for 10 days Use identical daily dosage for 5 days for shigellosis A guide follows

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
22	10	1 teasp (5 ml)	½ tablet
44	20	2 teasp (10 ml)	1 tablet
66	30	3 teasp (15 ml)	1½ tablets
88	40	4 teasp (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment

Creatinine Clearance (ml min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

PNEUMOCYSTIS CARINII PNEUMONITIS Recommended dosage 20 mg kg trimethoprim and 100 mg kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days See complete product information for suggested children s dosage table

Supplied: *Double Strength (DS) tablets*. each containing 160 mg trimethoprim and 800 mg sulfamethoxazole. bottles of 100. Tel-E-Dose® packages of 100. Prescription Paks of 20 *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500. Tel-E-Dose® packages of 100. Prescription Paks of 40. available singly and in trays of 10 *Pediatric Suspension* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole cherry flavored—bottles of 16 oz (1 pint) *Suspension*. containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole. fruit-licorice flavored—bottles of 16 oz (1 pint)

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc
Nutley. New Jersey 07110

April, 1979 Meetings

April 4–7	**Tennessee Medical Association** Airport Milton Inn Memphis, Tennessee
April 19–21	**Alabama Medical Association** Birmingham Hyatt House, Civic Center Birmingham, Alabama
April 19–22	**Missouri State Medical Association** Chase-Park Plaza Hotel St. Louis, Missouri
April 20–22	**Georgia Medical Association** De Soto Hilton Savannah, Georgia
April 21–22	**Iowa Medical Society** Hyatt House Des Moines, Iowa
April 22–25	**Arkansas Medical Society** Little Rock Convention Center Little Rock, Arkansas
April 25–29	**Arizona Medical Association** Safari Hotel Scottsdale, Arizona
April 26–29	**South Carolina Medical Association** Myrtle Beach Hilton Myrtle Beach, South Carolina
April 29–May 2	**Nebraska Medical Association** Holiday Inn Kearney, Nebraska

NEWS ROUND - UP

April, 1979

MSMA to sponsor three seminars

Communications Training Seminar

To follow up last fall's successful public relations orkshop at Tan-Tar-A, the Missouri State Medical Asociation is holding a Communications Training Semiar, Saturday, May 12, 1979, in Columbia.

This workshop is being sponsored by the MSMA Commission on Public Affairs and will be held at the amada Inn from approximately 10 a.m. to 4 p.m.

All interested members of the MSMA and the MSMA uxiliary are invited to attend this important seminar. he purpose is to encourage physician involvement in adio and television talk shows. The session will include ctual interview experience.

The seminar is being conducted by representatives om the Burroughs Wellcome Company. As a service to he medical profession, Burroughs Wellcome is presntly working with the MSMA to arrange interviews ith physicians on television talk shows and preparing apes of interviews for radio stations in the Boone ounty area. For any physician who is interested in articipating in this program as it expands into other reas in Missouri, this session offers invaluable training.

The speakers for the May seminar will include repreentatives from Missouri media and from the Buroughs Wellcome Company. Dave Reynolds and Steve oltrin, from Burroughs Wellcome, are communicaons consultants to the North Carolina Medical Society nd have worked with the American College of Physiians and many state medical associations. They have ad extensive experience on television and radio and ill do much of the interview training at the seminar.

Any member who would like to attend this comunications seminar or who would like more informaon is urged to fill out the accompanying box and send to the MSMA, Box 1028, Jefferson City, MO 65102. here will be a $5 registration fee to cover lunch.

Workshops for Medical Assistants

The Missouri State Medical Association and the Missouri chapter of the American Association of Medical Assistants, Inc. are sponsoring two workshops for physicians' office personnel in the central Missouri area.

The three-hour programs, "You, the Telephone Manager" and "Medical Collection Management," will be run morning and afternoon on each day so physicians will be able to send all of their personnel and still have coverage in the office. The workshops will be held June 6 and 7, 1979, at the Campus Inn in Columbia. The fee for each day is $20 and is tax deductible to the medical practice.

For further information, please contact the MSMA, Box 1028, Jefferson City, MO 65102.

Establishing Yourself in Medical Practice Workshop

There are still openings for resident physicians to attend "The Establishing Yourself in Medical Practice Workshop," May 3 and 4, 1979, in Columbia.

The location of the workshop, however, has been changed to the Columbia Best Western Inn, Jct. I-70 & 63 South. The registration fee is $60 for members of the MSMA and $75 for non-members.

This workshop is geared to provide physicians about to begin private practice with essential information on the business aspects of setting up and operating a medical practice. Subjects such as appointment scheduling, hiring employees, financing an office, collections and medical records will be discussed.

Those interested are urged to register as soon as possible to the MSMA, P.O. Box 1028, Jefferson City, MO 65102.

I am interested in attending the Communications Training Seminar, Saturday, May 12, 1979, at the amada Inn in Columbia.

ame ______________________________

ddress ______________________________

ity ______________________________

MSMA Legislative Contacts needed!!

The following State Representatives need MSMA Legislative Contacts. If you know these Representatives or know a physician who knows them and would be willing to contact them, notify MSMA Headquarters:

Representative	District	City	Zip
Fred Brummel	53	Bellefontaine Neighbors	(63137)
Carl Muckler	56	Florissant	(63033)
James (Jay) Russell	58	Florissant	(63031)
Francis Brady	61	Jennings	(63136)
Wayne Goode	68	Normandy	(63121)
Robert Fowler	69	Ferguson	(63135)
Charles Bratkowsky (new)	73	Overland	(63114)
James Riley	88	St. Louis	(63117)
Walt Mueller	93	Kirkwood	(63122)
Jack Buechner	94	Kirkwood	(63122)
Jack Goodman (new)	102	St. Louis	(63123)
Bud Fendler	104	St. Louis County	(63125)
Bill Raisch	107	Affton	(63123)

Officers of health organizations meet with MSMA President

John N. Martin, M.D., MSMA President, invited the chief elected officers and chief executive officers of several health related organizations in Missouri to meet to discuss issues of common interest.

At this meeting on March 22 in Jefferson City, the following organizations were represented: MSMA, Missouri Hospital Association, Missouri State Association of Licensed Practical Nurses, Missouri Pharmaceutical Association, Missouri Podiatry Association, Missouri Optometric Association, Missouri Nurses Association, Missouri Dental Association and Missouri Association of Osteopathic Physicians and Surgeons.

Participants discussed such subjects as problems with Medicaid, the Governor's Task Force on Rural Health and dispensing of drugs by physicians. The group also aired opinions on licensure of additional health care personnel and most agreed that there is no need for additional licensure and that lay members on state licensure boards would not help, but would not hurt the various boards.

Physicians contribute to sponsor medical students to Annual Session

At the 1978 Interim Session of the MSMA, a resolution was approved to initiate a program of inviting and sponsoring medical students to the Association's Annual Session.

Dr. John N. Martin, MSMA President, in his letter accompanying the 1979 Annual Session Preliminary Program, made a special request for contributions to the "MSMA Student Annual Session Fund."

To date, the following physicians have made contributions to the fund:

William C. Allen, M.D., Columbia
Otey S. Jones, M.D., St. Louis
John N. Martin, M.D., St. Joseph
Wallace R. Stacey, M.D., Independence
Jack N. Wiles, M.D., West Plains
St. Mary's Hospital Medical Staff, Kansas City, at the request of Robert Slickman, M.D.
Roy W. Pearse, Jr., M.D., Nevada

Malpractice study reveals significant findings

The National Association of Insurance Commissioners (NAIC) has released its two-part study of medical malpractice insurance claims. The two-yea analysis covers 16,500 claims filed July 1976 throug June 1978. Its first such study covered July 1975 t June 1976. Significant findings:

- The average indemnity paid per incident increased 28% in the two-year period between the firs and second studies;
- More claims now are resolved in court;
- Defendants are now winning 9 of 10 instead of 4 o 5 cases in court;
- Claims against physicians and surgeons amount t 61% of paid claims by count, 76% by amount paid;
- Claims against hospitals amount to 28% by count 19% by amount;
- "Other health professionals" have a significantl higher percentage of claims paid than any other defendant category;
- Hospitals, emergency rooms and hospital outpatient treatment areas account for the site of injury i 77% of the incidents by count, 87% by amount paid;
- Board-certified physicians and surgeons have a average indemnity paid that is significantly lower tha the non-certified physician or surgeon practicing in th same specialty.

MSMA computer is now operationa

The new MSMA in-house data processing system i now operational.

This system will process the dues billing, membe ship cards and address labels. It is also capable of listing all members in a particular specialty and keepin an accounting of Continuing Medical Education credit earned by members.

In April, the computer will process the third billin for members who have not yet paid their Associatio dues.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

Generics save money. Big money!

The FTC estimates that $400 million
ould be saved annually on the nation's
x bill if physicians prescribed generics.
re you saving *your* patients extra dollars?
Purepac, America's leading manufac-
urer of a national brand of generics,
ould like to show you the tremendous
avings possible with just three of our 700
eneric products:

RUG		AVERAGE RX PRICE (100's)	$ SAVINGS WITH PUREPAC	% SAVINGS WITH PUREPAC
avabid Capsules*	150 mg.	$10.32		
urepac Papaverine	150 mg.	3.95	**$6.37**	61.7%
quanil Tablets*	400 mg.	8.15		
urepac Meprobamate	400 mg.	1.85	**6.30**	77.3%
brium Capsules*	10 mg.	8.76		
urepac Chlordiazepoxide HCl.	10 mg.	3.90	**4.86**	55.4%

egistered trademarks of Marion Labs., Wyeth Labs., Roche Labs., respectively.

Purepac generics save money. Big
oney. Purepac is dedicated to providing
our patients with quality products that
e equivalent to their brand name
ounterparts at significant savings.
But we can't do it alone. We need
our cooperation.

Send for Purepac's *free* Brand Name/Generic Name Reference Chart today. You'll receive an alphabetical listing of brand name drugs with their generic counterparts.

And next time you write a prescription, write for Purepac brand generics. Your patients will know you care.

PUREPAC. Competitive prices and peace of mind.

FREE!

Please send me my FREE copy of Purepac's Brand Name/Generic Name Chart.

Name____________________

Address____________________

City__________State______Zip____

Mail to Purepac Pharmaceutical Co.,
200 Elmora Avenue, Elizabeth, N.J. 07207

MS479

PUREPAC
Elizabeth, NJ 07207
THE LEADING NATIONAL BRAND OF GENERICS

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, John N. Martin, M.D., St. Joseph
President-Elect, Andrew McCanse, M.D., Kansas City
Vice-President, Donald A. Fakhoury, M.D., Kansas City
Vice-President, Joseph V. Finnegan, M.D., St. Louis
Vice-President, H. B. Ivy, M.D., Springfield
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, James M. Stokes, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Lily Ann Hanes, M.D., St. Louis
Immediate Past-President, Howard J. McAlhany, M.D., Springfield

DELEGATES TO THE AMA

James C. Sisk, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*
Rae W. Froelich, M.D., Lebanon
Francis X. Lieb, M.D., St. Louis, *Alternate*
Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Donald Judd, M.D., St. Louis, *Alternate*

COUNCILORS

Richard V. Bradley, M.D., St. Louis, *Chairman*
Eugene T. Hansbrough, M.D., Poplar Bluff, *Vice-Chairman*

1st District, Richard C. Hedges, M.D., North Kansas City
Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Richard V. Bradley, M.D., St. Louis
Vice-Councilor, Richard Fallon, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
Vice-Councilor, Frederick D. Peterson, M.D., St. Louis
5th District, H. Peter Ekern, M.D., Mexico
Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
Vice-Councilor, Roy W. Pearse, Jr., M.D., Nevada
7th District, Irving H. Clark, M.D., Kansas City
Vice-Councilor, Ronald A. Youmans, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
Vice-Councilor, Marvin Singleton, M.D., Joplin
9th District, Claude W. Cooper, M.D., Thayer
Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, Eugene T. Hansbrough, M.D., Poplar Bluff
Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, Wilfred E. Wooldridge, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

Contents for April, 1979

Scientific Articles

Laetrile 'Case Histories,' *A Review and Critique;* John W. Yarbro, Ph.D. 195

Bedside Diagnosis of Deep Venous Thrombosis, *A Myth Exposed;* G. William Pogson, M.D. and Robert D. Conn, M.D. . 203

Physiologic Delay of Menarche, *Case Report;* Jamil A. Fayez, M.D., James R. Sowers, M.D. and Dennis W. Miller, M.D. 207

Severe Hand Venous Hypertension With an End-to-Side Radiocephalic Fistula, *Case Report;* Paul J. Garvin, M.D. and John E. Codd, M.D. 210

Effects of Antiplatelet Drugs on Platelet Function Tests; Marjorie S. Sirridge, M.D., Reaner Shannon, M.T. (ASCP), T. Lee Willoughby, M.S. and Paul Steele, M.D. 212

News and Features

MSMA News Round-Up ..... Insert (188-189)

Photo-Comment by James W. Clawson, M.D. 192

Editor's Corner 193

President's Message 221

MSMA Auxiliary 223

Editorial 224

News From the Medical Schools 225

Continuing Education Coming Events ... 227

In Memoriam 228

New Members 230

In Brief 235

Index to Advertisers 237

Missouri Medicine in Review 238

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
William M. Hart, M.D., Columbia
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Photo-Comment by James W. Clawson, M.D., Springfield

E OLDE BUGGY BATH
VENDING ISLAND
GE
CAUTION
CAUTION
CAUTION

No cry of cost containment here.
Califano, here we come!

Editor's Corner

THROUGH THE MICROSCOPE

Eighteen months ago, I made my first trip to New York City to spend an intensive week in dermatopathology training. The course was available to two physicians weekly throughout the year, pathologists or dermatologists. My week was shared with an Austrian. The chief resident was a Venzuelan. An assistant resident was from Czechoslovakia.

Last year, I went for another week. The Czechoslovakian had become chief resident. Two assistant residents were from Mexico and the Philippines. The fellow sharing the week with me was a French-speaking Belgian.

The official language around that table was broken English. There were, of course, lots of Americans, but I was the only Ozarkian within those people's recollection. My hillbilly patois, which I really didn't think was that bad, took a severe beating.

Now I have returned from a third week. The professor and I have become friends. He is a superb person with a knowledge of dermatopathology which leaves me respectfully aghast. By the time you read this, you will have already seen a thoughtful article by him in the January, 1979 issue of Missouri Medicine. During that third week, I felt I could ask him for a comparison of his American and foreign students. His analysis was interesting. It may be a timely commentary on general Americanism and one explanation for some of the problems we face today. He said:

"The foreigners come in here a bit overawed. Not knowing what to expect, and experiencing some language problems, they quietly get to work. They never let up. A common attribute, no matter from which direction they come, is that they are working as hard at the end as at the beginning."

"And, what," I asked, "of the Americans?"

"Quite different," he replied. "They come in with a flourish and there is all hell to pay during the first year. Then they feel comfortable. They begin to coast. The longer they stay, the less they accomplish. I think their real trouble is that they lack that burning desire. They are not as hungry. The more I listen, the more I hear about sport cars, skiing resorts and scuba diving. I can't blame them except I hear less of anything that savors of scholarship. By the time training is finished, the scholars are generally from overseas. The Americans are competent but not inspired. I have been criticized for favoring foreigners, but I try to put my effort where I think it will accomplish the most good."

My friends, could it be that the professor is telling us something which is very important? Haven't I read, again and again, of the softening of affluent societies? Morally, as well as physiologically, the human organism can much better tolerate starvation than it can tolerate growing too fat.

Are we growing too fat? The Greeks did, the Romans did, the Spaniards did. Maybe the English. And, now, the Americans?

Wilfred E. Wooldridge, M.D.

When the indications surface...
Net wt 1 oz
Net wt 1/2 oz
Net wt 1/32 oz
(approx)
NDC-0081-07
Net wt 1 oz
NEOSPORI
OINTMEN
POLYMYXIN B-BACITRACIN-
TOPICAL ANTIBACTE
Net wt ½ oz
NEOSPORI
OINTMENT
Net wt. 1/32 oz (approx.)
NEOSPORIN
POLYMYXIN B-BACI
TOPICAL ANT

NEOSPORIN® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base), special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa; primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis); traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Volume 76, Number 4 — April, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1979 BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

JOHN W. YARBRO, M.D., Ph.D., *Columbia*

Laetrile 'Case Histories'

A Review and Critique

UNSUBSTANTIATED CLAIMS of the safety and effectiveness of laetrile in cancer treatment continue to flood the nonscientific literature and have successfully deceived a substantial number of people, many state legislatures and even the federal judiciary.

Ordinarily, quack remedies are best ignored by the legitimate scientific literature since the burden of proof in science should rest on proper documentation by the proponent of any proposed therapeutic modality. However, laetrile represents an exception because of the tidal wave of public, legislative and judicial support stimulated by those whose profits are counted in the tens of millions.

Recently, Bantam Books of Toronto, New York and London published a volume entitled *Laetrile Case Histories* by John A. Richardson, M.D. and Patricia Griffen, R.N.[1] This book claims to report "90 actual case histories." These are little more than anecdotal accounts and only 62 patients are described. Since it is likely that physicians will be asked about these so-called responses to Laetrile by their patients, the purpose of this critique is to prepare them to respond to such questions.

BACKGROUND

About 1922, Ernst T. Krebs, Sr., M.D., developed a cancer remedy that he called sarcarcinase. He applied for a patent in 1933 and described his remedy as a mixture of the enzymes amygdolase, primase, oxynitrilase, catalase, peroxydase and a proteolytic enzyme. A false claim of the laetrile proponents is that this was an early preparation of amygdalin. Dr. Krebs, Sr. did not list amygdalin as a component of sarcarcinase. If his directions for its preparation were followed, any amygdalin present would have been destroyed.[2]

About 1949, the son of Dr. Krebs, Sr., Ernst T.

Laetrile has been adequately and, indeed, excessively studied experimentally in animals and man. Laetrile today is packaged in preparations varying in purity, strength and degree of contamination. It is toxic and deaths have resulted from the cyanide poisoning due to laetrile and apricot pits.

The multiple series of cases provided by its proponents have been reviewed by different medical authorities who find no evidence whatsoever that there is any objective patient benefit from its use. The author states that the most recent report of 62 cases presented by Dr. John Richardson only confirms the uselessness of the drug and its use should be considered medical quackery.

Dr. Yarbro is Professor and Chairman, Department of Oncology, University of Missouri School of Medicine.

TABLE 1
ANIMAL MODEL AND IN VITRO TESTING OF LAETRILE (AMYGDALIN) WITH AND WITHOUT GLUCOSIDASE: ALL THESE STUDIES HAVE BEEN NEGATIVE

Year	*Model System*
1953	C-1300 Neuroblastoma[3]
1953	Mouse dba Leukemia[3]
1953	Sarcoma 180[3]
1957	Carcinoma 775[4]
1957	Sarcoma 180[4]
1957	Leukemia L1210[4]
1960	Carcinoma 775[4]
1960	Sarcoma 180[4]
1960	Leukemia L1210[4]
1965	Human Breast Carcinoma[5]
1965	Human Astrocytoma[5]
1965	Human Bronchogenic Carcinoma[5]
1965	Human Colon Adenocarcinoma[5]
1965	Ehrlich Ascites[5]
1965	Novikoff Hepatoma[5]
1969	Leukemia L1210[4]
1973	Walker 256[4]
1973	Leukemia L1210[4]
1973	Leukemia P388[4]
1973	B16 Melanoma[4]
1973	Lewis Lung Carcinoma[6]
1975	Leukemia P388[6]
1975	Lewis Lung Carcinoma[6]
1975	Ridgway Osteogenic Sarcoma[7]
1975	Leukemia L1210[7]
1975	Leukemia P388[7]
1975	Walker 256[7]
1975	B16 Melanoma[7]
1976	BW 5147 AKR Leukemia[8]
1976	B16 Melanoma[8]

Krebs, Jr., who had no graduate degree in medicine or science, claimed to have prepared a cancer remedy which he named laetrile. He claimed that this was a purified derivative of sarcarcinase which eliminated the toxicity observed by his father.[2]

By 1953, laetrile was in use in California under conditions so sufficiently similar to a quack remedy that it came to the attention of the Cancer Commission of the California Medical Society. A remarkably thorough study[3] revealed the following: (1) the theory of action was not scientifically valid; (2) tests of laetrile in animal tumors showed the drug to be inactive; (3) the composition of laetrile was actually amygdalin (D-mandelonitrile-beta-D-glucosido-6-beta-D-glucoside) in spite of the claims of Krebs Jr. that it was L-mandelonitrile-beta-glucuronic acid; (4) in 44 cases reviewed, there was no evidence that laetrile had produced an objective response of the malignant process; and (5) in six autopsies on patients who had received laetrile, there was no evidence of an antineoplastic effect.

It is of special note that Krebs Jr. *refused* to participate in a well designed clinical trial which the Cancer Commission was willing to sponsor.

In 1956, Andrew McNaughton provided support for the advocates of laetrile. The sources of the funds of the McNaughton Foundation have been widely reported in the public press. In January, 1963, the McNaughton Foundation submitted to the California Department of Public Health a total of 14 clinical records of patients treated with laetrile in Canada. A careful review failed to show either palliation or regression of tumor.[2]

Thirty-five case histories of patients treated with laetrile in California were reviewed by the California Department of Public Health in June of 1962. Once again, there was no evidence that laetrile had produced objective responses.[2]

In 1971, the FDA and the National Cancer Institute reviewed 12 clinical histories submitted by Dr. Ernesto Contreras of Tijuana. As in the previous case histories, there was inadequate detail and documentation and no evidence of objective benefit.[2]

Thus, in a total of 105 case reports reviewed by various authorities, there was no evidence that laetrile was effective.

During the past 25 years, laetrile (provided by Krebs, McNaughton and other proponents) and chemically pure amygdalin have been tested in various tumors in animals in vivo and in vitro and in tumors in human beings in vitro under a wide variety of conditions. Not one study has concluded that either substance is active. These studies are summarized in Table 1.

During the past 50 years, the theories of how laetrile acts against cancer have shifted regularly. Dr. Krebs Sr. apparently subscribed to the "trophoblast theory" of John Beard (the original Krebs Foundation was named the John Beard Memorial Foundation). Beard thought there might be an association between pancreatic enzymes and protection from cancer because he claimed the trophoblast resolved as the fetal pancreas developed. Certainly, the original remedy of Dr. Krebs Sr. was an enzyme mixture.

Krebs Jr. may have proposed that amygdalin was cleaved in tissue to release cyanide by the enzyme B-glucosidase. It is known that his preparation of laetrile in 1953 contained amygdalin.[3] He *claimed*, however, that the preparation contained a glucuronic acid. Why? Perhaps because after he began to work with amygdalin he found that B-glucosidase was primarily a plant and not an animal enzyme, and such activity was found in only trace amounts in animal tissues with no increase in cancer tissue. Perhaps it was because a few years previously, the enzyme B-glucuronidase was reported to be present in neoplastic tissues[9] and this enzyme would not be active against amygdalin but might be expected to act against the compound he claimed was laetrile.

Krebs Jr. probably abandoned his claim that laetrile was not amygdalin after the California Cancer Commission had laetrile analyzed because there was an interval in the mid-1950s when a two-shot treatment was advocated in which amygdalin was followed after a 15-minute interval by B-glucosidase. This was described in an article copyrighted in 1955 by Dr. Krebs Sr., and Dr. Arthur Harris and entitled "The Treatment of Breast Cancer with Laetrile by Iontophoresis."[2] In any event, by 1962, the literature of the laetrile proponents seemed to draw no distinction between the two quite different enzymes. Later, there was a shift to the idea of nonenzymatic cleavage of amygdalin in the stomach, transport of the cyanide containing moiety to the liver, conversion to the glucuronide, transport to the tumor, and release of cyanide by the action of glucuronidase.[2] By the early 1970s, the theory had changed once more. Now, laetrile was a vitamin that prevented cancer by releasing cyanide. Whether this was an attempt to have it exempted from FDA regulation or to open up a larger market for sales is unknown.

Richardson, in his 1977 book, has returned to the pancreatic enzyme theory and couples it with the Krebs vitamin theory.[1] Thus, there have been a plethora of theories changing from year to year and differing, depending upon which of the laetrile proponents is speaking and the composition of the audience. None of the theories is even plausible.

In 1977, wide publicity was given to the death due to cyanide poisoning of an infant who ingested laetrile tablets.[10] Toxicity of cyanogenic glycosides in various natural products has long been known. Laetrile is toxic in dogs when ingested in conjunction with beta-glucosidase.[11] Acute toxicity is manifested as acute cyanide poisoning.[12-17] Chronic toxicity is manifested as ataxic neuropathy.[18, 19] Cyanogenic glycosides have also been shown to result in birth defects in animals[20] and, thus, must be considered potentially carcinogenic. This is of particular concern if laetrile is used, as its advocates suggest, as a cancer preventive by large numbers of normal people.

Materials and Methods

Richardson's book, *Laetrile Case Histories* (pp. 117-223), was used as the sole source of case history data. These cases were incomplete and poorly documented, but pathology reports (quoted in part) and patient reports of medical findings were accepted *at face value* except where grossly inadequate, even though selective quotations and distortions were obvious in many places.

The latest follow-up dates referred to were usually January 1977. The first printing was in May 1977. For this reason, when the last patient follow-up date was not given but the patient was described as "doing beautifully ever since" or "until this writing," etc., the last date of follow-up was assumed to be in January 1977.

Adequate curative therapy was estimated on the basis of the description recorded and current clinical practices. Thus, for breast cancer, a radical mastectomy with radiotherapy (if recommended) was considered adequate. If a recommended primary therapy was declined, the therapy was considered inadequate except in the case of adjuvant chemotherapy. Proven recurrent disease was scored if the result of a biopsy was referred to (whether or not the report of the biopsy was included) or in certain other situations in which the recommendations of the patient's physician made it clear that recurrent disease was almost certainly present, i.e., radiotherapy to a symptomatic area was recommended.

The authors obviously wanted to have a chapter on cancer of the lung, but they included no patients in this category. Therefore, they titled a chapter "Cancer of the Lung" and included *metastatic* cancer. These cases have been analyzed with the appropriate group of primary cancers as have several other cases listed under an incorrect chapter heading. A summary of these 62 cases is shown in Table 2.

TABLE 2
TYPES OF CANCER INCLUDED IN RICHARDSON'S REPORT

Site of Primary	*No. of Cases*	*Site of Primary*	*No. of Cases*
Breast	9	**Lymphoma**	1
Prostate	9	**Thyroid**	1
Colon	9	**Astrocytoma**	1
Cervic	6	**Tongue**	1
Bladder	4	**Larynx**	1
Chronic Lymphatic Leukemia	4	**Basal Cell Carcinoma**	1
		Probable Lymphoma	1
Hodgkin's Disease	2	**Probable Basal Cell**	1
Ovary	2	**"Brain Cancer"**	1
Osteogenic Sarcoma	2	**"Leukemia"**	1
Endometrium	1	**Unknown**	2
Pancreas	1		
Chronic Myeloid Leukemia	1		

RESULTS

Breast Cancer

Nine cases of breast cancer were presented with pathology findings reported in five as "infiltrating ductal carcinoma" and merely as carcinoma or cancer in four. These cases are shown in Table 3, and they fall into the following four categories:

1. *Primary cancer with adequate therapy.* The laetrile was given in the manner of adjuvant therapy. Two patients (one Stage II, one probably Stage II) received radical mastectomies, one with postoperative radiation. Both patients are reported as being alive and well at 13 and 21 months.

2. *Proven recurrent disease.* The laetrile was given in the manner of a palliative. Four cases are reported with no objective responses. Subjective responses are reported with patients being alive at ten, ten, 16 and 24 months.

3. *Recurrence not proven.* There is one patient (#B 138 I) alive at 42 months. She reported that her physician recommended further evaluation for a "shadow" on the chest X-ray; she turned to laetrile.

4. *Recommended primary therapy not given.* Two cases are reported. One patient who had an excision biopsy only reportedly had tumor at the margins and is alive at 34 months; the second patient, alive at seven months, declined postoperative radiotherapy after a radical mastectomy.

With the exception of Case #B 138 I, none of these cases is at variance with the natural history of breast cancer at the probable stage and with the conventional therapy given. If the patient in Case #B 138 I, indeed, had a lung metastasis (and this was not proven), 42 months would be an unusually long survival time without adequate therapy.

Cervix

Six cases of carcinoma of the cervix were presented. Four were either proven in situ or diagnosed by Pap smear alone. One was called "Stage I" and the other "Stage II." Five patients refused primary treatment, four had biopsies done by conization and all were offered surgery by their legitimate physicians and refused. The fifth refused to have the biopsy done. All are doing well at 12, 12, 21, 26 and 45 months, respectively. The case histories place great stress on the fact that the class of cells seen on the Pap smears "improves" in a matter of days after laetrile therapy. They avoid giving data between the date of conization and the start of laetrile. The sixth patient had adequate

TABLE 3
BREAST CANCER PATIENTS TREATED WITH LAETRILE. RADICAL MASTECTOMY IS INDICATED AS RAD. MAST. AND RADIOTHERAPY AS RT

Case No	*Age*	*Estimated Stage*	*Primary Treatment*	*Proof of Recurrence*	*Date on Laetrile*	*Last Following*	*Months on Rx*	*Comment*
F 161 W	53	II	Rad Mast 2/10/75	—	3/24/75	1/1/77	21	Initial treatment potentially curative
I 125 M	?	II(?)	Rad Mast Post-op RT 10/30/74	—	3/10/75	4/4/76	13	
K 132 MH	?	II	Rad Mast Post-op RT 5/x/74	Yes 4/x/76	2/3/76	1/1/77	10	Palliation with laetrile
B 157 M	?	?	Mastectomies 1967 & 1974	Yes 6/x/75	2/4/76	1/1/77	10	
C 106 MA	38	II	Rad Mast Post-op RT 12/x/72	Yes 7/x/75	8/7/75	1/1/77	16	
F 115 L.	60	?	Rad Mast Post-op RT 9/x/69	Yes 6/x/77	12/26/74	1/1/77	24	
B 138 I	49	?	Rad Mast Post-op RT 11/x/77	No	6/x/73	(?)1/1/77	42	Recurrence not proven. Has suspicious chest x-ray
M 110 MX	57	?	Biopsy only 7/x/74	—	8/x/74	1/1/77	28	Margins of Bx involved
B 145 C	34	?	Rad Mast	—	9/10/75	3/30/76	7	Positive nodes, told she had residual disease, refused RT

TABLE 4
CARCINOMA OF CERVIC TREATED WITH LAETRILE. NONE HAD PRIMARY THERAPY. SURGERY RECOMMENDED IN ALL FOUR CASES THAT HAD CONE BIOPSY. NONE HAD SHOWN RECURRENCE OF DISEASE

Case No.	*Age*	*Stage*	*Cone Biopsy*	*Date on Laetrile*	*Date of Last Follow-up*	*Months on Laetrile*	*Comments*
M 122 T	55	?	Probably	3/4/75	1/1/77	21	Called "Stage I," but could have been in situ
B 133 L	28	in situ	Yes	1/x/76	1/1/77	12	
A 101 A	41	in situ	Yes	3/10/75	3/3/76	12	
K 124 M	49	in situ	Yes	7/3/73	1/1/77	45	
P 162 N	34	positive Pap smear	No	10/10/74	12/25/76	26	
E 148 M	48	probably II	—	8/7/74	11/7/75	15	Had full course of radiotherapy 9/72. Developed hematuria in 7/74.

radiotherapy by external beam and internal sources. Two years later, hematuria led to a clinical diagnosis of a recurrence in the bladder, but no biopsy was done. She turned to laetrile and was well at 15 months. On examination, her physician felt that the bladder lesion was improved. These cases are shown in Table 4.

There is nothing unusual about these cases to suggest that laetrile had any effect whatsoever. Carcinoma in situ may persist for years without becoming invasive. The one case that may have shown an objective change was not a proven recurrence and could have been radiation effect.

Prostate

Nine cases of carcinoma of the prostate are reported. All apparently are proven by biopsy with one important exception. This latter case (the patient is alive after eight years of laetrile treatment) was not documented by a pathology report but merely by the statement that "diagnosis of cancer was made by his local doctor." One patient with bone metastasis that developed eight years after primary surgery was reported to be doing well on laetrile therapy at 12 months.

The remaining seven case reports all refer to a biopsy diagnosis and none of the patients received the recommended management. All were doing well on laetrile therapy at 13, 14, 16, 20, 28, 32 and 38 months. None of these patients survived unusually long for this chronic malignancy. In two cases, the absence of "tumefaction" is noted, but pretreatment observations are absent. One case report shows a decrease in tumor size but, again, no pretreatment data is given. The one case report which makes reference to the dates of both pretreatment and posttreatment rectal examinations shows a disappearance of the tumor in 23 days of laetrile therapy. These cases are summarized in Table 5.

Colon-Rectum

Nine cases of colon-rectum carcinoma are reported as shown in Table 6. These cases may be classified into three categories:

1. *Primary cancer with adequate therapy.* The laetrile was used in the manner of an adjuvant. Two cases are reported: one patient turned to laetrile in place of 5FU recommended presumably as adjuvant therapy, and the second declined what was apparently a second look operation. Both patients are alive at 18 months and 13 years, respectively.

2. *Advanced cancer treated by palliative therapy* (colostomy, segmental resection, abdomino-perineal). Four patients with known metastatic disease are alive at nine, 16, 17 and 20 months. One of them reported by letter that her lung metastasis had disappeared completely (#S 111E).

3 *Recommended therapy not given.* A biopsy of the tumor was the only test in three cases. One patient had a well-differentiated adenocarcinoma in a polyp, and is alive and well at "three years," but no follow-up dates are given. The second patient with a squamous cell carcinoma of the rectum is alive at 23 months. The third had a "rectal cyst" and is alive at ten months.

Unless the regression of lung metastasis documented by a letter from one patient is to be accepted, there is nothing in this series of cases that is out of the usual range of behavior of colon-

TABLE 5
CARCINOMA OF THE PROSTATE TREATED WITH LAETRILE

Case No	*Age*	*Biopsy Proof*	*Primary Treatment*	*Date on Laetrile*	*Last Date Follow-up*	*Months on Laetrile*	*Comment*
A 140 R	?	Yes 10/13/75	Explored not resectable	11/19/75	1/1/77	13	
H 151 W	69	Yes 10/8/74	TUR	1/3/75	3/4/76	14	Patient delay
B 108 C	78	Yes 5/29/75	Refused	8/8/75	1/1/77	16	8/8/75 "tumifaction"
L 123 A	62	Yes 2/18/75	Lymphangiogram positive	4/8/75	12/x/70	20	Claim no mass found on one exam after laetrile therapy started
K 114 M	66	Yes 7/29/74	Refused	8/26/74	1/1/77	28	Claim no mass found on one exam after laetrile therapy started
B 109 WJ	73	Yes 2/x/73	Refused	7/12/73	3/3/76	32	Claim that mass decreased
P 107 J	61	Yes 8/4/73	Bone scan positive	10/25/73	1/1/77	38	Patient delay
R 160 PA	?	Yes 1966	Resection, had recur. in bone 9/24/74	12/30/75	1/1/77	12	Bone pain responded to DES but patient became depressed
B 144 J	62	No	No	1969	1977	96	No pathology report

rectal cancer given the stage and treatment of this group.

Bladder

Four cases of bladder cancer were described and specified as follows: papillary transitional cell carcinoma Grade I-II, transitional cell carcinoma Grade IV Stage A, papillary carcinoma, and not specified. The first patient had two resections through a cystoscope prior to radiotherapy (6,500 rads) and two more resections before turning to laetrile therapy which gave subjective benefit for 12 months. This patient was examined at cystoscopy on two occasions by his own physician, once early during laetrile treatment and once late. No change was seen in the lesion. The second patient had a surgical resection with a recurrence 18 months later and was treated with radiotherapy (5,400 rads). Fulguration was subsequently necessary, and the patient turned to laetrile and was symptomatically well at 24 months. The third and fourth patients also had chronic tumors and were doing well (symptomatically) on laetrile therapy at 12 and 17 months, respectively.

In no case is the clinical course of these patients out of the ordinary pattern.

Leukemia

Four patients with chronic lymphatic leukemia (CLL) were described as being treated with laetrile for 11, 18, 28 and 47 months. Simple observation had been recommended for two patients and chemotherapy for one. The recommendations for the fourth were not stated. One turned to laetrile after reading a list of complications of chemotherapy. It is of more than passing interest that the only patient in whom Dr. Richardson reports using steroids was the only patient who had a markedly elevated lymphocyte count.

One patient with leukemia of unspecified type was reported as receiving laetrile for 24 months and a patient with chronic myeloid leukemia received laetrile for 17 months. None of these case histories is outside of the variation of untreated leukemia.

Lymphoma

Two cases of Hodgkin's disease are reported, both in young women with nodular sclerosing type. One patient, who was Stage IV B, had received standard radiotherapy and MOPP prior to turning to laetrile therapy which was still helping her symptoms at 26 months. The other patient (Stage II B) was lost to follow-up in less than 12 months, but there was a claim that the size of her lymph nodes was reduced with no therapy except laetrile.

A patient with well differentiated lymphocytic lymphosarcoma of the tonsil with enlarged cervical nodes received only laetrile therapy and was

TABLE 6
COLON RECTAL CANCER TREATED WITH LAETRILE

Case No	*Age/ Sex*	*Primary Treatment*	*Clinical Note*	*Date on Laetrile*	*Date Last Follow-up*	*Months on Laetrile*	*Comment*
R 168 MS	66F	Segmental resection 1/11 Nodes Pos. 6/x/75	Potentially curative treatment	6/21/75	1/7/77	18	Initial treatment potentially curative
S 163 E	49F	Segmented resection 3/6 nodes pos. 12/x/63	Potentially curative treatment	1964	1/1/77	156	Krebs treated patient before Richardson
C 120 C	53M	Palliative colostomy 11/x/74	Regrowth at colostomy site	2/20/75	11/29/75	9	—
S III E	64F	Palliative colostomy 5/29/75	Lung metastases	8/14/75	1/4/77	16	A letter from patient claimed complete clearing of pulmonary metastases
A 139 DJ	63M	Palliative AP resection 3/30/75	Liver metastases seen at surgery	7/29/75	1/19/77	17	Patient delayed six months with rectal bleeding
R 159 RX	50M	Palliative segmental resection 4/14/75	Liver metastases seen at surgery	4/x/75	1/1/77	20	—
P 131 B	65F	Biopsy only 6/21/75	"Rectal cyst"	7/x/75	4/6/76	10	Patient refused surgery
H 132 I	59F	Polypectomy only 4/5/73	"Well differentiated adenomatous polyp"	4/26/73	1/1/77	44	—
L 142 N	72F	Biopsy only 12/x/74	"Squamous cell carcinoma of rectum"	1/22/75	12/x/76	23	

doing well according to a letter written "two years" later. The fourth case was presented in some detail and classified by Dr. Richardson as a melanoma. The result of the biopsy of a scalp lesion in a 20-year-old student nurse was interpreted in a letter to Dr. Richardson as "complete diagnosis of the tumor was impossible with various possibilities being listed as follows: (1) amelanotic melanoma, (2) reticulum cell sarcoma, (3) histocytoma and (4) embryonal rhabdomyosarcoma."

Metastatic lesions were found in the spine and hip. This patient received radiotherapy to the scalp lesion and intensive chemotherapy with Bleomycin, CCNu, and later MOPP. Severe hematologic toxicity developed before conventional medical care was abandoned for laetrile therapy which the patient felt helped her for 39 months. The clinical course of this patient's lesion is far more like that of a lymphoma than a melanoma. Considering the intensive chemotherapy, a prolonged remission is not unlikely, though perhaps not the general pattern.

The book then described a series of single tumor types, none of which are particularly remarkable in their course of laetrile treatment: thyroid (three months); squamous cell carcinoma of tongue with 6,500 rads radiotherapy (three years); basal cell carcinoma (15 months); probable basal cell carcinoma (19 months); astrocytoma Grade II after surgery and radiotherapy (17 months); pancreatic carcinoma after a Whipple procedure (14 months); osteogenic sarcoma (12 months); unknown primary diagnosed on pleural fluid cytology alone (11 months); and an unknown primary possibly colon (34 months).

Another patient with no pathological proof of malignancy had surgery for "cancer of the brain" and reportedly did well during laetrile therapy for about four years.

A patient with squamous cell carcinoma diagnosed by multiple biopsies of the vocal cord refused treatment and claimed to have benefitted from laetrile.

Perhaps the most interesting case (#H 150 S) is that of a 6-year-old boy diagnosed as having an osteogenic sarcoma after a needle biopsy was done and who was treated with radiotherapy at an unknown dose (probably palliative since metastatic disease was felt to be present). Pre- and post-laetrile films are available and illustrate an objective response. The radiation could have been responsible for this if the tumor was unusually sensitive to radiation. The boy is reported well at 37 months.

DISCUSSION

The first point to be made is that these 62 cases were selected by Dr. Richardson from more than 4,000 patients he admitted he had treated with laetrile. This is, therefore, a report of a selected group of 1.5% of the patients treated. The natural history of cancer in human beings is such that any large number of cancer patients contains a small percent with an unusually favorable clinical course. Thus, if Dr. Richardson selected his best patients, he could present a group with a survival time of two or three standard deviations greater than normal, even if no effective therapy at all were given. Even so, the patients in his cases appear to have a survival time no better than would be expected on the basis of the natural history of cancer.

It is probably fruitless to pursue cases #S11E, #B138I and #H150S. The laetrile proponents report different cases each time and have a remarkable record of noncooperation when the questions asked threaten to approach objective data.

There is a second point that deserves emphasis. In reading through these case histories, there appears to be a larger than usual number of patients who delay diagnostic or therapeutic approaches to their cancer. This is compatible with the theories suggesting the psychological mechanisms that lead patients to turn to quack remedies. Namely, they are pathological fear, denial, resorting to primitive (magical) solutions to their problem and, finally, a vigorous defense of their therapy choice both by the patient (denial) and his relatives (guilt). What is included in letters and patient comments emphasizes the vitriolic attack on the medical profession that is characteristic of this psychological syndrome.

A third point requires more cautious comment. If laetrile is as toxic as it seems to be and if cyanogenic glycosides are sufficiently mutagenic to cause birth defects, as is certain in animals at least, then it is not a placebo because, by definition, a placebo must be an inactive drug (it may, nonetheless, exert a placebo effect). Is there a possibility, however remote, that there may be some drug activity that could prove useful? This is unlikely for two reasons. First, such an action would likely have been observed in the past quarter century of study. Second and more important, all the toxic effects of laetrile seem to be due to the release of cyanide. The release of cyanide from laetrile does not appear to be a result of human physiological enzymatic functions. Rather, it seems to result from the contamination of the laetrile or the *fortuitous* simultaneous ingestion of vegetable products containing B-glucosidase.

Finally, we must address the national problem which the success of the laetrile hoax brings directly into focus. As physicians, we have studied and attempted to deal with psychopathology on an individual basis. The fears, paranoia and "magical" thinking which have led patients, as individuals, to turn to quacks, is an example. But, the laetrile phenomenon is national in scope; it touches tens of thousands of patients, several right wing organizations, numerous state legislatures and even the federal judiciary. The laetrile issue seems to fit with the climate of Vietnam and Watergate, with the conspiracy theories of history, the suspicion of the establishment and the "magical" thinking of simple solutions to complex problems.

There is a climate of anti-science and anti-intellectualism that may be increasing. Are we facing a national psychopathology of which laetrile is only a symptom? We neglect this possibility, however speculative, at our peril.

REFERENCES

1. Richardson, J. A. and Griffen, P.: *Laetrile Case Histories*. Bantam Books, Toronto, New York and London, 1977.

2. Laetrile: Commissioner's Decision on Status. Federal Register 42:39767-39806, 1977 (Aug. 5, 1977).

3. Cancer Commission of the California Medical Association. The Treatment of Cancer With "Laetrile." Calif. Med. 78:320-326, 1953.

4. Office of Cancer Communications, National Cancer Institute, Report on Laetrile. October, 1975.

5. Levi, L., Franch W. N., Bickis, I. J. and Henderson, I. W. D.: Laetrile: A Study of Its Physiochemical and Biochemical Properties. Canada Med. Assoc. J. 92:1057-1061, 1965.

6. Laster, W. R., Jr. and Schabel, F. M., Jr.: Experimental Studies of the

(Continued on page 206)

G. WILLIAM POGSON, M.D. *and*
ROBERT D. CONN, M.D., *Kansas City*

Bedside Diagnosis of Deep Venous Thrombosis

A Myth Exposed

IN RECENT YEARS, the development of new diagnostic techniques for evaluating deep venous thrombosis (DVT) has forced the clinician to review and revise previously held beliefs concerning this disease. Doppler studies, plethysmographic studies, venography and, especially, I^{125} fibrinogen scanning all point to a problem of greater magnitude than had been previously acknowledged.

It is now apparent that large numbers of postoperative patients develop DVT and that pulmonary embolism causes a significant number of postoperative deaths.[1] Studies have shown that 30% to 45% of postoperative patients over 40 years of age have DVT.[2, 3] Medical patients have fewer episodes of DVT, but the numbers are still significant.[4] In the United States, an estimated 140,000 to 200,000 patients die of pulmonary embolism each year, although these estimates may be high.[5] Furthermore, the late sequelae of the postphlebitic syndrome with pain, leg edema and stasis ulcers and the morbidity and mortality resulting from anticoagulation point to the need for accurate clinical diagnosis.[6]

For years, physicians have been taught the classic signs and symptoms of DVT. Those upon which they most heavily rely are unilateral leg edema with discrepancy of measured size, pain and tenderness, palpation of cords, dilated superficial veins and Homans' sign. Authors of recent textbooks have continued to express enthusiasm for the accuracy of these signs.[7] Consequently, most physicians feel secure in anticoagulating a patient with a swollen, tender leg in the absence of lymphangitis, cellulitis and superficial thrombophlebitis.

Contrary to this view are a number of studies published in recent years. Despite the use of various techniques in different populations, most investigators have shown that the classical signs of DVT are often misleading and frequently unreliable. Table 1 shows that a high percentage of patients with suspected DVT have no objective evidence of venous obstruction.

Early evidence suggesting that clinical findings were misleading came from a Canadian autopsy study in which critically ill patients were examined twice weekly for signs of thrombophlebitis.[17] Autopsies, including venous dissection, were performed on patients who died. It was found that a difference of ankle size was predictive of DVT, although the predictability of Homans' sign, local tenderness and venous dilatation was poor.

Haeger *et al*, using venography, reemphasized the inaccuracy of clinical findings.[8] In this study, patients were listed as "highly suspected" or

TABLE 1

Author	*Population*	*False Positive Clinical Diagnosis**	*Comments*
Haeger[8]	Mixed	45%	DVT highly suspected
		66%	DVT suspected
Richards[9]	Mixed	60%	DVT suspected
Alexander[10]	Mixed	77%	DVT suspected
Barnes[11]	Mixed	63%	Dx of DVT entertained
Cranley[12]	Mixed	45%	DVT suspected
Lambie[13]	Surgical	28%	High risk for DVT
Appleberg[14]	Mixed	62%	Distal disease
		16%	Proximal disease
Moser[15]	Medical	45%	DVT suspected
Hull[16]	Mixed	57%	DVT suspected

* Patients thought to have DVT who had normal venograms.

New techniques for diagnosing deep vein thrombosis (DVT) have produced a stimulus for a reinvestigation of the accuracy of the bedside diagnosis of this disease. The authors cite nine studies from which they conclude that the physical signs and symptoms of DVT are not sensitive or specific enough to insure diagnostic accuracy. They include an algorithm to guide the clinician in examining the patient suspected of having DVT.

Dr. Pogson is a Resident in Medicine at St. Luke's Hospital and Dr. Conn is Staff Cardiologist at St. Luke's Hospital and Clinical Professor of Medicine, University of Missouri School of Medicine.

"suspected" depending upon whether they had a total of four or three of the following findings, respectively: spontaneous pain in the calf, calf tenderness to palpation, temperature difference between the legs, swelling of the calf and ankle, dilatation of superficial veins, Homans' sign and Lowenberg's sign (tenderness of the calf with proximal thigh pressure). In the "highly suspected" group (four signs present), 55% of the patients had venography-proven DVT. In the "suspected" group (three signs present), 34% had proven DVT. The overall accuracy of the traditional signs was only 46%.

Richards *et al* performed detailed evaluations of the recognized physical signs of DVT.[9] A total of 11 distinct clinical signs were studied. In addition to the previously mentioned signs, they included Moses' sign (tenderness more marked on anterior-posterior than lateral compression), Ramirez' sign (calf tenderness by inflating thigh cuff to 45 mm Hg for five minutes) and Peabody's sign (spasm of calf muscles by simultaneous elevation of extremities and extension of feet by examiner). None of the signs or combinations of signs had an acceptable frequency and predictability for DVT. Even the sign of palpable thrombi was falsely positive in two of 12 examinations in which it was present. The Peabody sign, though rarely present (19 out of 150 patients), had a fairly good predictability (two of 19 were false positives). The other signs were far less accurate. Other studies have confirmed the inaccuracy of the physical examination.[10-12]

TABLE 2
DIFFERENTIAL DIAGNOSIS OF DVT

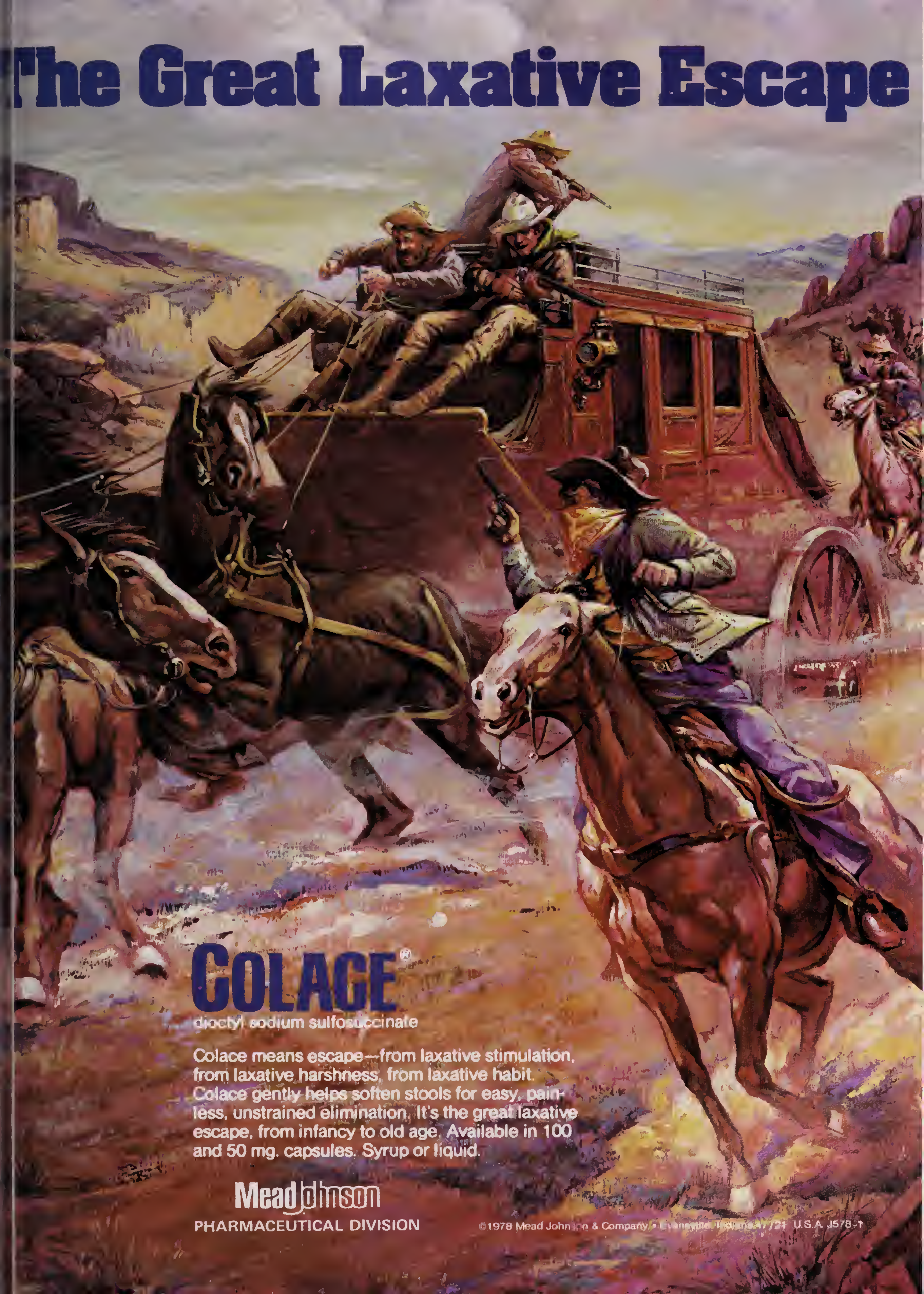
1. Malignant venous or lymphatic obstruction
2. Lymphangitis, cellulitis
3. Subfascial hematoma (trauma)
4. Arthritis and ruptured Baker's cyst
5. Pregnancy with leg edema
6. Post-phlebitic syndrome without thrombosis
7. CHF
8. Paralysis with edema
9. Ruptured plantaris tendon

The diagnostic accuracy of clinical findings appears to be enhanced in high risk patients, although it too falls short of desired accuracy. Using I^{125} fibrinogen scanning, Lambie *et al* evaluated the incidence of DVT in patients selected for risk.[13] Patients included in this study were obese patients over 45 years of age undergoing gynecological surgery, patients over 40 undergoing abdominal surgery and elderly patients having operations for hip fractures. Of 25 patients with a firm clinical diagnosis of DVT, 18 had documented thrombi, leaving 28% with false positive diagnoses even in this high risk group.

Proximal (iliofemoral) venous obstruction should produce physical findings that are relatively diagnostic, although this assumption has not been extensively investigated. Appleberg showed that of 12 patients suspected of having proximal venous occlusive disease, ten had documented DVT, leaving 16% false positives.[14] These investigators found it difficult to diagnose distal disease, however, with 62% positive examinations in patients with no thrombi. It is generally felt that proximal lesions are more significant with respect to morbidity and mortality.[18] However, the prospective study by Moreno-Cabral *et al* found a 35% incidence of pulmonary embolism in a group of 27 patients with tibial vein thrombosis.[19]

A number of disorders may present clinical signs and symptoms that mimic DVT (Table 2).[11] Of these, several may be recognized if the patient is carefully examined. Hematoma may be suspected if an ecchymosis is noted in the area of pain. Similarly, a ruptured Baker's cyst and plantaris tendon may be detected by their characteristic physical findings (Table 2).

The importance of an accurate diagnosis can be appreciated only by considering the morbidity of anticoagulant therapy. Bleeding may be present in diverse locations, including spontaneous hematomas of the intestinal wall, rectus sheath, iliopsoas muscle, retroperitoneal space, adrenal glands, pleural and pericardial spaces, central nervous system, joints, gastrointestinal and urinary tracts and others. Cutaneous reactions have been noted with anticoagulant therapy. They in-



COLACE®

dioctyl sodium sulfosuccinate

Colace means escape—from laxative stimulation, from laxative harshness, from laxative habit. Colace gently helps soften stools for easy, painless, unstrained elimination. It's the great laxative escape, from infancy to old age. Available in 100 and 50 mg. capsules. Syrup or liquid.

Mead Johnson
PHARMACEUTICAL DIVISION

©1978 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. J578-1

This asthmatic isn't worried about his next breath...

he's active he's effectively maintained on

QUIBRON®

Each capsule or tablespoonful (15 ml) liquid contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg

- theophylline for effective around-the-clock bronchodilator therapy
- 100% free theophylline

Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.
Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.
Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e. clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.
Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.
How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Liquid in bottles of 1 pint and 1 gallon.
See package insert for complete prescribing information.

Mead Johnson
PHARMACEUTICAL DIVISION

© 1979 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. MJL 6-4220

clude purpura, purple toes, hemorrhagic necrosis and lesions typical of drug allergy — macular, papular, vesicular and urticarial eruptions. Thrombocytopenia is a well recognized side effect of heparin therapy.

How, then, can the clinician avoid the pitfalls of a well intended but frequently inaccurate clinical diagnosis of DVT? High quality venography remains the gold standard for the diagnosis, but it is limited by cost and availability. However, noninvasive techniques that have enhanced diagnostic accuracy have been developed. Among these techniques are Doppler ultrasound,[11] phleborrheography[12] and impedance plethysmography.[15, 16, 20] All of these techniques are more accurate with proximal lesions and range from 75% to 95% in accuracy for predicting DVT. Most of these techniques, however, are not yet available in smaller hospitals.

TABLE 3
RISK FACTORS FOR DVT

1. Previous DVT
2. Obesity
3. Postoperative period
4. Fractured hip, trauma
5. Heart failure
6. Malignancy
7. Estrogens
8. Prolonged bed rest

The physician who is without these facilities but must continue to care for the patient in this setting is challenged to take a set of nonspecific signs and symptoms and to make a specific diagnosis of DVT or an alternate diagnosis. Baye's theorem should be used in evaluating the probability of DVT in any given patient. Simply stated, the predictability of a positive test depends upon the incidence of the disease in the population studied.[21] Thus, calf pain and tenderness in a group of high school athletes would have much less predictability for DVT than a similar finding in a group of postoperative patients with obesity and congestive heart failure. A careful survey of the risk factors for DVT in a given patient might well be more predictive of the presence or absence of DVT than the physical examination. Factors which increase the risk of DVT include previous DVT, obesity, a postoperative period (particularly after a splenectomy or orthopedic, abdominal and pelvic

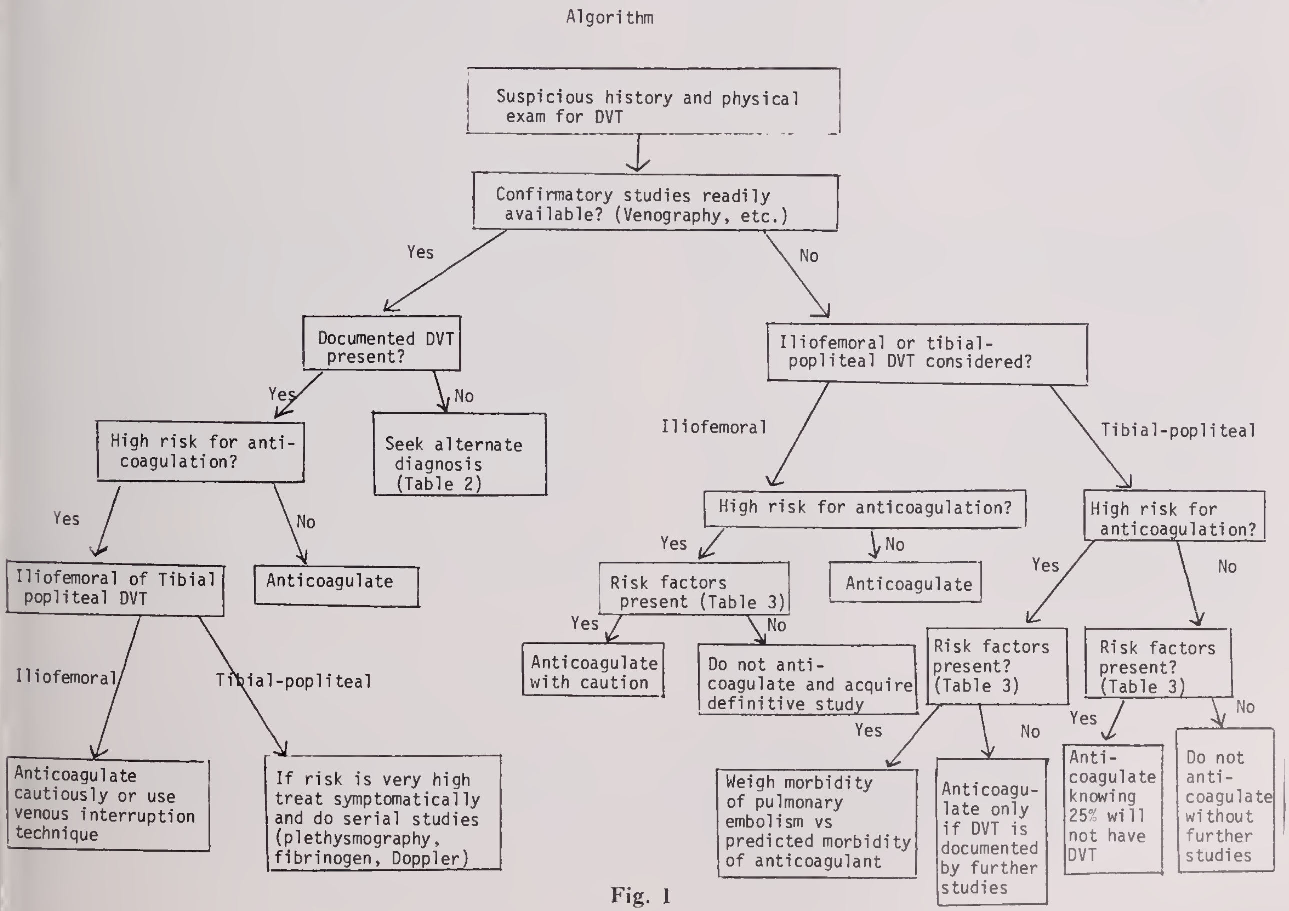

Algorithm
Suspicious history and physical exam for DVT
Confirmatory studies readily available? (Venography, etc.)
Yes
No
Documented DVT present?
Yes
No
High risk for anti-coagulation?
Seek alternate diagnosis (Table 2)
Yes
No
Iliofemoral of Tibial popliteal DVT
Anticoagulate
Iliofemoral
Tibial-popliteal
Anticoagulate cautiously or use venous interruption technique
If risk is very high treat symptomatically and do serial studies (plethysmography, fibrinogen, Doppler)
Iliofemoral or tibial-popliteal DVT considered?
Iliofemoral
Tibial-popliteal
High risk for anticoagulation?
Yes
No
Risk factors present (Table 3)
Anticoagulate
Yes
No
Anticoagulate with caution
Do not anti-coagulate and acquire definitive study
High risk for anticoagulation?
Yes
No
Risk factors present? (Table 3)
Risk factors present? (Table 3)
Yes
No
Yes
No
Weigh morbidity of pulmonary embolism vs predicted morbidity of anticoagulant
Anticoagu-late only if DVT is documented by further studies
Anti-coagulate knowing 25% will not have DVT
Do not anti-coagulate without further studies

Fig. 1

surgery), fractures of the hip and other trauma, congestive heart failure, malignancy, estrogen use and prolonged bed rest (Table 3).

The related risk of anticoagulation as well as the extent and location of the proposed thrombosis must enter into the decision to treat the patient for DVT on the basis of the physical examination. An algorithm (Fig. 1) is included as a suggested procedure in evaluating the patient with suspected DVT. Without confirmatory studies, however, the number of false positive examinations using this algorithm will range from 15% to 50%. The clinician, then, must gather all available data, recognize the inherent ambiguities which they present and arrive at the best statistical decision while weighing the risk and benefit to the patient.

REFERENCES

1. Husni, E. A., Ximenes, J. O. C. and Goyette, E. M.: Elastic Support of the Lower Limbs in Hospital Patients. JAMA 214(8):1456-1462, 1970.
2. Kakkar, K. V., Howe, C. T., Nicoloides, A. N. *et al:* Deep Venous Thrombosis of the Leg. Am. J. Surg., 120:527-530, 1970.
3. Clogett, G. P. and Salzman, E. W.: Prevention of Venous Thromboembolism in Surgical Patients. NEJM 290:93-96, 1974.
4. Cristal, N.: Identifying Patients at Risk for Thromboembolism: Use of I^{125} Labeled Fibrinogen in Patients With Acute Myocardial Infarction. JAMA 236:2755-2757, 1976.
5. Coon, W. W.: Epidemiology of Venous Thromboembolism. Ann. of Surg. 196:149-164, 1977.
6. Macon, W. L., Morton, J. H. and Adams, J. T.: Significant Complications of Anti-Coagulant Therapy. Surg. 68(3):571-582, 1970.
7. Horwitz, O.: Venous Thrombosis — Pulmonary Embolus Complex and Other Venous Diseases. In *Cardiac and Vascular Disease*. Hadley L. Conn, Jr. and Orville Horwitz, ed. Philadelphia, Pa., Lea and Febiger, 1584, 1971.
8. Haeger, K.: Problems of Acute Deep Venous Thrombosis: I, The Interpretation of Signs and Symptoms. Angiology 20:219-223, 1969.
9. Richards, K. L. *et al:* Non-Invasive Diagnosis of Deep Venous Thrombosis. Arch. Int. Med. 126:1091-1096, 1976.
10. Alexander, R. H. *et al:* Thrombophlebitis and Thromboembolism: Results of a Prospective Study. Ann. of Surg. 180(6):883-887, 1974.
11. Barnes, R. W., Wu, K. K. and Hoali, J. C.: Fallibility of the Clinical Diagnosis of Venous Thrombosis. JAMA 234:605-607, 1975.
12. Cranley, J. J., Canos, A. J. and Sull, W. J.: The Diagnosis of Deep Venous Thrombosis: Fallibility of Clinical Symptoms and Signs. Arch. Surg. 111:34-36, 1976.
13. Lambie, J. M. *et al:* Diagnostic Accuracy in Venous Thrombosis. British Med. J. 2:142-143, 1970.
14. Appleberg, M.: The Need for Objective Diagnosis of Deep Vein Thrombosis. SA Med. J. 50:248-250, 1976.
15. Moser, K. M., Brach, B. B. and Dolan, G. F.: Clinical Suspected Deep Venous Thrombosis of the Lower Extremities: A Comparison on Venography, Impedance Plethysmography and Radiolabeled Fibrinogen. JAMA 237(20):2195-2198, 1977.
16. Hull, R. *et al:* Combined Use of Leg Scanning and Impedance Plethysmography in Suspected Venous Thrombosis. NEJM 296(26):1497-1500, 1977.
17. McLachlin, J., Richards, T. and Paterson, J. C.: An Evaluation of Clinical Signs in the Diagnosis of Venous Thrombosis. Arch. of Surg. 85:58-64, 1962.
18. Barnes, R. W.: Prospective Screening for Deep Vein Thrombosis in High Risk Patients. Am. J. Surg. 134:187-190, 1977.
19. Moreno-Cabral, R., Kistner, R. L. and Nordyke, R. A.; Importance of Calf Vein Thrombophlebitis. Surg. 80(6):735-742, 1976.
20. Whecler, H. B., O'Donnell, J. A. and Anderson, F. A.: Occlusive Impedance Phlebography: A Diagnostic Procedure for Venous Thrombosis and Pulmonary Embolism. Prog. Cardiovasc. Dis. 17:199-205, 1974.
21. Krieg, A. F., Gambino, R. and Galen, R. S.: Why Are Clinical Laboratory Tests Performed? When Are They Valid? JAMA 233(1):76-78, 1975.

Reprints: Robert D. Conn, M.D.
4320 Wornall Rd.
Kansas City, Mo. 64111

Laetrile

(Continued from page 202)

Antitumor Activity of Amygdalin M. F. (NSC-15780) Alone and in Combination With B-Glucosidase (NSC-128056). Ca. Chemo. Rep. 59:951-965, 1975.

7. Wodinsky, I. and Swiniarski, J. K.: Antitumor Activity of Amygdalin, M. F. (NSC-15780) as a Single Agent and With B-Glucosidase (NSC-128056) on a Spectrum of Transplantable Rodent Tumors. Ca. Chemother. Rep. 59:939-950, 1975.
8. Hill, G. J., Shone, T. E., Hill, H. Z. and Miller, C.: Failure of Amygdalin to Arrest B16 Melanoma and BW5147 AKR Leukemia. Ca. Res. 36:2102-2107, 1976.
9. Fishman, W. H. and Anlyan, A. J.: Comparison of the Beta-glucuronidase Activity of Normal, Tumor and Lymph Node Tissue of Surgical Patients. Sci. 106:66-67, 1947
10. Humbert, J. R., Tress, J. H. and Braico, K. T.: Fatal Cyanide Poisoning: Accidental Ingestion of Amygdalin. JAMA 238;482, Aug. 8, 1977.
11. Schmidt, E. S., Newton, G. W., Sanders, S. M., Lewis, J. P. and Conn, E. E.: Laetrile Toxicity Studies in Dogs. JAMA 239:943-947, 1978.
12. Smith, F. P., Butler, T. P., Cohan, S. and Schein, P. S.: Laetrile Toxicity Report of Two Cases. JAMA 238:1361, 1977. Ca. Treatment Rep. 62:169-171, 1978.
13. Bureau of Communicable Disease Control, State Department of Public Health Cyanide Poisoning from the Ingestion of Apricot Kernels, California Morbidity #34 (Sept. 1, 1972), #45 (Nov. 14, 1975), #51 (Dec. 26, 1975).
14. Sayre, J. W. and Kaymakcalan, S.: Cyanide Poisoning From Apricot Seeds Among the Children of Turkey. NEJM 270:113, 1964.
15. Yatziv, A. S.: Cyanide Intoxication in Childhood After Ingesting Apricot Kernels. J. Israeli Med. Assoc. 76:535, 1969.
16. Center for Disease Control DHEW Report of W. A. Townsend, M.D., and B. Boni, M.D. of Division of Medical Sciences, San Diego County and California State Department of Health in California Morbidity #45 (Nov. 14, 1975).
17. Sadoff, L., Fuchs, K. and Hollander, J.: Rapid Death Associated With Laetrile Ingestion. JAMA 239:1532, 1978.
18. Ross, J. F.: The Harmful Effects of Laetrile, Apricot Kernels, and Other Cyanogenic Fruit and Vegetable Materials on Human Beings With Cancer. Statement Presented to Subcommittee on Health and Scientific Research, Committee on Human Resources, United States Senate, July 12, 1977.
19. Osuntokun, B. O.: Ataxic Neuropathy Associated With High Cassava Diets in West Africa. Chronic Cassava Toxicity (Eds. Neste, B., and MacIntyre, R.(. International Development Research Center, Ottawa, Canada, 1973.
20. Selby, L. A., Menges, R. W., Houser, E. C., Flatt, R. E. and Case, A. A.: Outbreak of Swine Malformations Associated With the Wild Black Cherry, *Prunus Serotina*. Arch. Environ. Health 22:496-501, 1971.

The American Retired Physicians Association has changed its name to American Association of Senior Physicians, since present bylaws permit membership beginning at age 55. New president of the group is Justin J. Stein, M.D., Long Beach, Calif. For information on the organization, write to AASP, 536 N. State St., Chicago, Ill. 60610.

JAMIL A. FAYEZ, M.D., JAMES R. SOWERS, M.D.
and DENNIS W. MILLER, M.D., *Kansas City*

Physiologic Delay of Menarche

Case Report

PRIMARY AMENORRHEA, irrespective of its etiology, is a noteworthy symptom. Unlike secondary amenorrhea, which is often due to pregnancy or psychic factors, primary amenorrhea is usually associated with pathologic disorders. However, physiologic delay of menarche does exist, though rarely beyond the age of 18. Therefore, physiologically delayed menarche should be suspected whenever gonadal dysgenesis and Müllerian duct anomalies are excluded. The defect in these patients is probably at the hypothalamic-pituitary level, usually due to the immaturity of the hypothalamus.

The administration of clomiphene citrate and luteinizing hormone releasing hormone (LHRH)* have been utilized to test for maturation of the hypothalamic-pituitary axis in patients with primary amenorrhea.[1] The response to clomiphene depends on the hypothalamic maturity status. In mature individuals, clomiphene acts as a competitive inhibitor of estrogen to stimulate gonadotropin secretion[2]. In prepubertal girls, it acts as a weak estrogen causing a decrease in gonadotropin secretion.[3] Thus, the response of the hypothalamic-pituitary axis to such clomiphene challenging tests could differentiate between the mature and immature axis. The pituitary gonadotropin response to LHRH administration in patients with primary amenorrhea has been reported to be of a great diagnostic value in differentiating between prepubertal girls with premature hypothalamus and pubertal with mature hypothalamus.[4]

In an attempt to delineate whether the delay of menarche in this patient was due to pathologic condition in the hypothalamic-pituitary axis or to a dysfunctional disorder of the axis, we have studied the gonadotropins and prolactin response to clomiphene and LHRH administration.

CASE REPORT

Clinical Features: A 19-year-old, white girl came to the endocrine clinic two years ago complaining that she had never menstruated. She stated that breast development had started at the age of 16 while pubic and axillary hair was noticed at the age of 17. No past history of significance was elicited. The patient's mother was 4 ft 10 in tall, never weighed more than 80 lbs and had her menarche at the age of 17. The patient had three sisters, ages 17, 11 and 7 years. The first is 4 ft 11 in tall and weighed 80 lb. Her menarche at the age of 15 was followed by regular periods. The patient was aware of odors and identified two substances correctly.

The girl was 4 ft 11 in tall and weighed 72 lb. She appeared to be of average intelligence. Breasts, pubic hair and axillary hair were normal. External and internal genitalia were normal. Barr bodies were observed in the buccal smear and the karyotype was 46 XX. Results of adrenal and thyroid function tests were within normal limits. At the age of 17, her follicle-stimulating hormone (FSH) was 1.6 mu/ml (normal 1-5), luteinizing hormone (LH) 3.2 mu/ml (normal

Although primary amenorrhea is usually associated with pathologic disorders, physiologic delay of menarche exists. In this case of a 19-year-old girl, the diagnosis of the latter was established. The authors discuss the evaluation and management of patients with physiologically delayed menarche with the warning that oral contraceptive pills should never be prescribed for these adolescents.

Dr. Fayez is Professor, University of Missouri School of Medicine and Chief, Section of Reproductive Endocrinology, Department of Obstetrics and Gynecology, Truman Medical Center. Dr. Sowers is Associate Professor at the School of Medicine and Chief of the Endocrine Research Laboratory at the Medical Center. Dr. Miller is Chief Resident in the Department of Obstetrics and Gynecology at the Medical Center.

---

* LHRH is not approved for use in the United States except for research purposes.

1-10) and prolactin (PRL) was 4.9 ng/ml (normal less than 30). Serum FSH and LH were measured by radioimmunoassay.

A tentative diagnosis was physiologically delayed menarche. The patient was reassured and asked to return to the endocrine clinic after a year. One year later, the patient stated she still had no periods. FSH was 8.3 mu/ml, LH was 9.0 mu/ml and prolactin was 7.5 ng/ml. The result of a progesterone withdrawal bleeding test was negative. Laparoscopic ovarian biopsy specimens were reported as normal ovarian tissue. The patient was reassured again and was advised that treatment wasn't warranted.

Six months later, a maturation index (MI) was obtained and no cervical mucus was available for a fern test. The hypothalamic-pituitary ovarian axis was challenged with clomiphene citrate and LHRH. One hundred milligrams of clomiphene were administered daily for five days. Three blood samples, taken one hour apart, were drawn one week and two weeks after initiation of treatment. Four weeks after the initiation of treatment, cervical mucus was obtained, MI was taken and 100 mg of progesterone in oil were given. Two weeks after progesterone was given, an intravenous bolus of 100 ug synthetic LHRH was administered and venous blood samples were taken at −30, 0, +10, +15, +30, +45, +60, +90 and 120 minutes. Three weeks later, cervical mucus was obtained, a MI was taken and progesterone in oil was administered.

Gonadotropin and prolactin assays: Serum PRL was measured by a homologous radioimmunoassay (RIA) technique[5] using reagents supplied by the National Pituitary Agency (NIAMDD). The sensitivity of the assay was 3.12 ng/ml and the intra-assay coefficient of variation was 6%. Serum LH was measured by a double antibody RIA using NIAMDD preparation LER-907 as the assay standard.[6] The minimal detectable level of LH was 1.0 mIu/ml. Serum FSH was measured by a double antibody RIA procedure[7] using LER-907 as the assay standard. The minimal detectable level was 0.5 mIu/ml.

Results

Baseline FSH and LH were low-normal prior to clomiphene and LHRH stimulation tests. Seven days after the clomiphene administration, there was no change in FSH serum levels but LH was increased. Fourteen days after the administration of clomiphene, FSH and LH returned to their baseline values (Table 1). Following LHRH administration, FSH remained about the same while there was a great increase in LH values (Table 2). There was no change in the baseline values of prolactin following either test.

TABLE 1
DYNAMIC TESTING OF THE HYPOTHALAMIC-PITUITARY AXIS WITH CLOMIPHENE CITRATE

Specimen Collected 60 min Apart	*FSH N 1-5 mu/ml*	*LH N 1-10 mu/ml*	*Prolactin N <30 ng/ml*
Baseline	2.5	3.6	15.0
	2.2	3.5	14.0
7 days after Clomid	3.1	10.3	16.0
	2.7	10.5	16.0
	2.8	14.0	14.0
14 days after Clomid	1.3	1.8	13.5
	2.0	1.8	11.0
	1.6	1.1	11.5

The result of a fern test was positive after both clomiphene and LHRH stimulation. MI was 0/99/1, 0/95/5 and 0/85/15 before stimulation and after clomiphene and LHRH, respectively. The result of a progesterone withdrawal bleeding test was positive only after LHRH as the patient bled five days. Three months later, 100 mg of progesterone in oil were given and the patient bled seven days with an average flow daily.

Discussion

There is a difference of opinion about the age at which primary amenorrhea should be evaluated. Most endocrinologists believe that girls who have not menstruated by the age of 16 should be evaluated. However, individualization is probably more appropriate as growth at adolescence is more a function of physiologic than of chronologic age. Because the onset of menarche is usually governed chiefly by genetic and socioeconomic factors and because this patient followed her mother's chronologic development, her evaluation initially did not go beyond historical review, the physical examination and very limited pertinent laboratory tests.

The diagnosis of physiologic delayed menarche was established after excluding nutritional, endocrinologic and systemic disorders. The pres-

TABLE 2
DYNAMIC TESTING OF THE HYPOTHALAMIC PITUITARY AXIS WITH LUTEINIZING HORMONE RELEASING HORMONE (LHRH)

Specimen	*FSH N 1-5 mu/ml*	*LH N1-10 mu/ml*	*Prolactin N <30 ng/ml*
−30 min.	2.0	1.3	12.5
0	1.3	0.9	15.5
+10	2.0	11.0	14.0
+15	2.1	22.5	11.5
+30	2.4	33.8	7.6
+45	2.1	25.0	9.5
+60	2.7	20.5	10.0
+90	3.1	19.0	11.8
+120	3.4	19.0	11.5

ence of Barr bodies in the buccal smear and the normal karyotype excluded chromosomal anomalies. The low normal gonadotropins ruled out primary ovarian failure while normal prolactin level ruled out pituitary adenoma as the cause of delayed menarche.

Several investigators have pointed out that a single plasma FSH value is sufficient for diagnosing the presence or absence of ovarian follicles in almost all the cases of amenorrhea.[8] Therefore, it is believed that the normal serum values of FSH and LH in this patient were indicative of the presence of follicles. The laparoscopic ovarian biopsy done to obtain this information was of an academic rather than of a diagnostic value.

Since determination of gonadotrope secretory response to clomiphene and LHRH in many instances will distinguish the child with physiologic delay of menarche from that with hypothalamic or pituitary pathologic disorders,[9] it was decided to challenge the hypothalamic-pituitary axis of the patient using these agents. In pubertal and adult women, clomiphene stimulates the hypothalamus to cause release of LHRH and thus pituitary secretion of LH and FSH. In prepubertal girls with an immature hypothalamic-pituitary axis, clomiphene causes a decline in gonadotropin secretion.[10] Puberty is accompanied by changes in pituitary gonadotrope secretory responsiveness to the gonadotropin releasing hormone. In prepubertal children, the LH release is low, but FSH secretion is enhanced by the administration of LHRH while, during puberty and adulthood, the LH response increases and that of FSH declines.[4] Underweight girls who showed flat response to LHRH experienced no immediate spontaneous menstruation while the majority of those who responded proved to have great tendency for starting their periods.[11]

Using the above considerations, we would interpret the results obtained in Tables 1 and 2 as indicative of maturity of the hypothalamic-pituitary axis. The serum FSH and LH responses to clomiphene and LHRH were normal for a woman in the reproductive years of life. The serum prolactin levels were consistently normal. Due to the fact that this patient responded to LHRH stimulation, it is believed that she will menstruate after her mother's 80 lb menarchal weight is achieved. No treatment should be offered to patients with physiologic delay of menarche since spontaneous resolution will ultimately occur, but sometimes does not do so until the age of 20.

One caution is that under no circumstances should oral contraceptive pills be given to these adolescents. Such therapy may interfere with the hypothalamic-pituitary function at a highly critical time of development.

References

1. Kulin, H., Grumbach, M. M. and Kaplan, S. L.: Changing Sensitivity of the Pubertal Gonadal Hypothalamic Feedback Mechanism in Man. Science 166:1012, 1969.
2. Igarashi, M., Ibuki, Y., Kubo, H. *et al:* Mode and Site of Action Clomiphene. Obstet. Gynecol. 97:120, 1967.
3. Kelch, R., Kaplan, S. L. and Grumbach, M. M.: Suppression of Urinary and Plasma Follicle-Stimulating Hormone by Exogenous Estrogens in Prepubertal and Pubertal Children. J. Clin. Invest. 52:1122, 1973.
4. Grumbach, M. M., Roth, S. C., Kaplan, S. L. and Kelch, R. P.: Hypothalamic-Pituitary Regulation of Puberty in Man. In the Control of the Onset of Puberty. New York, John Wiley and Sons, 1974, p. 115.
5. Sowers, J. R., Hershman, J. M., Carlson, H. E. *et al:* Prolactin Response to N^{3im} Methyl-Thyrotropin-Releasing Hormone in Euthyroid Subjects. J. Clin. Endocrinol. Metab. 43:749, 1976.
6. Dattatryamurty, B., Sheth, A. R., Purandare, T. V. *et al:* RIA of hLH in Presence of HCG. Endocrinology, 99:1554, 1976.
7. Midgley, A. R.: Radioimmunoassay for Follicle-Stimulating Hormone. J. Clin. Endocrinol. Metab. 27:295, 1967.
8. Goldenberg, R. L., Gondin, J. M., Rodbard, D. and Ross, G. T.: Gonadotropins in Women With Amenorrhea. Am. J. Obstet. Gynecol. 110:1003, 1973.
9. Wentz, A. C., Schoemaker, J., Jones, G. S. and Sapp, K. C.: Studies of Pathophysiology in Primary Amenorrhea. Obstet. Gynecol. 50:129, 1977.
10. Root, A. W. and Reiter, E. O.: Evaluation and Management of the Child With Delayed Pubertal Development. Fertil. Steril. 27:745, 1976.
11. Ginsburg, J., Scadding, G. and Harvard, C. W.: Primary Amenorrhea: The Ambiguous Non-Entity. Brit. Med. J. 2:32, 1977.

Reprints: Jamil A. Fayez, M.D.
Truman Medical Center
2301 Holmes St.
Kansas City, Mo. 64108

The American Medical Association will sponsor a workshop on "Physicians and Chronic Mental Patients: Potentials for Community Based Care" on May 10-11 at the Palmer House in Chicago. Participants will focus on identifying priorities in medical education as they relate to the physician's role in providing comprehensive care to patients with long-term or severe mental disabilities. For information, contact Ms. Suellen Muldoon, Associate Director, Department of Mental Health, AMA, 535 N. Dearborn, Chicago, Ill. 60610.

PAUL J. GARVIN, M.D., *and*
JOHN E. CODD, M.D., *St. Louis*

Severe Hand Venous Hypertension With an End-to-Side Radiocephalic Fistula

Case Report

THE SIDE-TO-SIDE RADIOCEPHALIC ARTERIOVENOUS FISTULA, as described by Brescia and associates,[1] remains the hallmark for vascular access in chronic hemodialysis. Delayed complications are few and long-term patency greatly exceeds external cannulae and any interposition conduit in use today. Hand venous hypertension secondary to retrograde venous arterialization is an occasional complication of the side-to-side fistula and has prompted surgeons at several centers to construct an end-to-side anastomosis in an attempt to avoid this.

This is a report of the authors' recent experience with a case of severe venous hypertension which developed 36 months after creation of an end-to-side radiocephalic fistula.

Case Report

The patient was a 39-year-old man with chronic renal failure secondary to glomerulonephritis. In January, 1975, chronic hemodialysis was required and an end-to-side radiocephalic fistula was created in his left wrist. This functioned satisfactorily. Because swelling of his left hand and forearm made needle punctures for dialysis difficult, however, a right-sided radiocephalic fistula was created in February, 1976. Both fistulae were used alternately until January, 1978, when further swelling of the left hand developed along with purulent ulcers on the second and third digits of this hand (Fig. 1).

A fistulogram (Fig. 2) demonstrated high grade stenosis of the cephalic vein with retrograde arterial flow through two large dorsal veins to the left hand. A ligation of the A-V fistula was performed and the patient was treated with local care of the ulcerations and systemic antibiotics. Within ten days, the hand swelling had resolved and the ulcerations on his fingers were greatly improved (Fig. 3). At this time, the right-sided A-V fistula continues to be used for dialysis.

Comments

Hand venous hypertension is the result of retrograde venous arterialization of the distal venous limb of the side-to-side radiocephalic fistula. With time, this can result in massive swelling, skin induration and eventual ulceration of the hand similar to the progression of chronic venous insufficiency of the lower extremity. Because of this occasional complication, an end-to-side

The authors report a case of severe venous hypertension which developed 36 months after creation of an end-to-side radiocephalic fistula, which is the procedure followed at some medical centers. They suggest that the side-to-side radiocephalic arteriovenous fistula remains the hallmark for vascular access in chronic hemodialysis. Dr. Garvin and Dr. Codd are from the Department of Surgery, St. Louis University Hospitals.

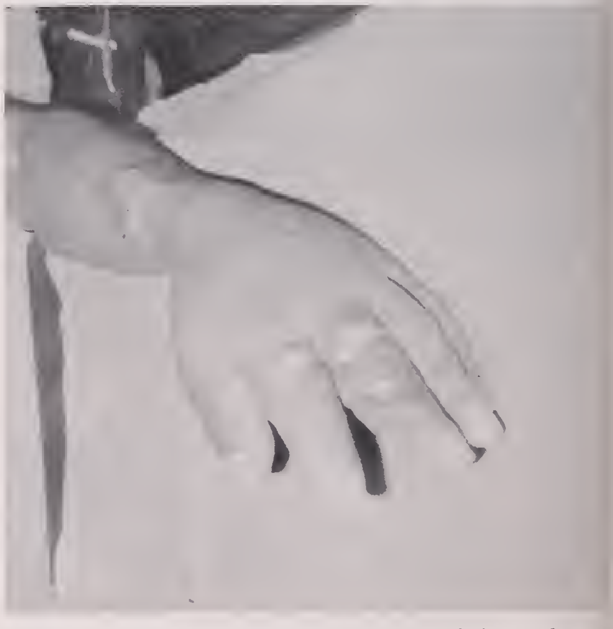


Fig. 1 Preoperative photograph of left hand demonstrates severe swelling with deep ulcers on second and third digits.

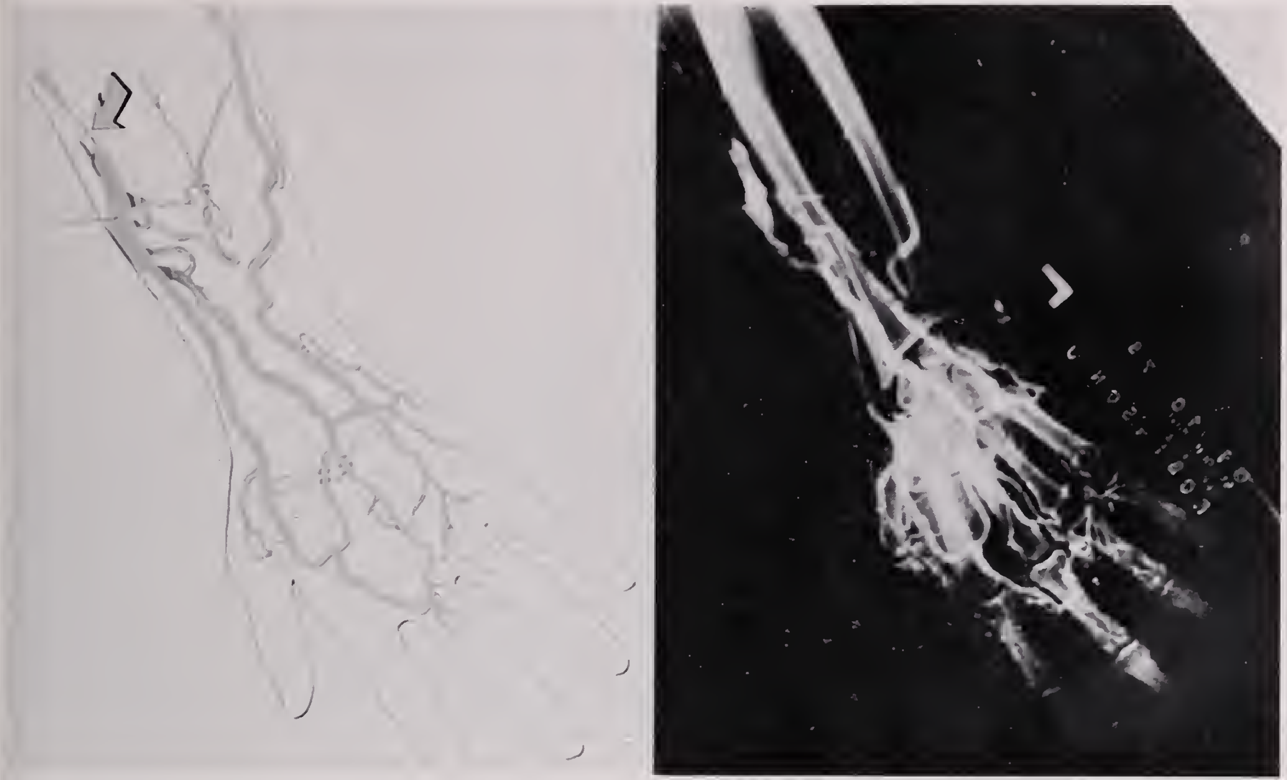


Fig. 2 Fistulogram with accompanying drawing demonstrates severe stenosis of cephalic vein *(arrow)* with retrograde flow to the hand.

radiocephalic fistula is performed at several medical centers. Some authors even recommend ligation of the dorsal venous branch from the hand at the time of fistula creation.[2]

This case is an example of far advanced venous hypertension occurring 36 months after construction of an end-to-side radiocephalic fistula. The fistulogram demonstrates progressive stenosis of the cephalic vein with resultant increased retrograde flow through hand collaterals. Treatment by ligation of the fistula, antibiotics and local wound care resulted in prompt reversal of this process.

REFERENCES

1. Brescia, M. J., Cimino, J. E., Appel, K. and Hurwich, B. J.: Chronic Hemodialysis Using Venipuncture and a Surgically Created Arteriovenous Fistula. N. Engl. J. Med. 275:1089, 1966.
2. Haimov, M., Baez, A., Neff, M. and Slifkin, R.: Complications of Arteriovenous Fistulas for Hemodialysis. Arch. Surg. 110:708, 1975.

Reprints: Paul J. Garvin, M.D.
St. Louis University
Dept. of Surgery
St. Louis University Hospitals
1325 S. Grand Blvd.
St. Louis, Mo. 63104

Fig. 3 Postoperative photograph of left hand demonstrates that hand swelling is gone and ulcers are healing.

MARJORIE S. SIRRIDGE, M.D., REANER SHANNON, M.T. (ASCP),
T. LEE WILLOUGHBY, M.S. *and* PAUL STEELE, M.D., *Kansas City*

Effects of Antiplatelet Drugs on Platelet Function Tests

IN RECENT YEARS, there has been an explosive increase in the volume of research directed toward the pharmacologic prevention of atherosclerosis and thromboembolism. Increasing clinical use of antiplatelet drugs seems likely, although the efficacy of these drugs is still not firmly established for many of the conditions for which they have been advocated. Relationships between decreased susceptability to thrombosis and impaired platelet function, as tested quantitatively in vitro, are controversial. The reader is referred to recent reviews of clinical trials of antiplatelet drugs.[1-5]

Our study examines the ranges of normal values for common platelet function tests and the influence on such test results of various doses and combinations of aspirin, dipyridamole (Persantine), ibuprofen (Motrin) and acetaminophen (Tylenol) administered to normal subjects. The data assume importance for the physician who wishes to monitor compliance to an antiplatelet regimen that has been found to produce predictable changes in platelet function tests in normal subjects. Should platelet function test results be found to parallel the degree of protection from atherosclerosis or thromboembolism, the data would also assume relevance to considerations of effective drug dosage and combination.

TABLE 1
DRUGS AND DRUG COMBINATIONS

A_2	Aspirin (650 mgm)*
A_4	Aspirin (1300 mgm)*
P_2	Dipyridamole (50 mgm)*
P_4	Dipyridamole (100 mgm)*
AP_1	Aspirin (975 mgm) and Dipyridamole (100 mgm) at bedtime with testing in a.m.
AP_2	Aspirin (325 mgm) and Dipyridamole (75 mgm) 3 x daily x 4 doses, with testing one hour after 4th dose
M	Ibuprofen (800 mgm)*
AM	Acetaminophen (650 mgm)*

* Testing done one to two hours after administration.

SUBJECTS AND METHODS

A total of 22 normal subjects between the ages of 21 and 29 years was included in this study. There were 12 men and ten women. Four of the women were taking oral contraceptives during at least part of the study. Each subject served as his or her own control since testing was done before and after the administration of one of the drugs or drug combinations listed in Table 1. In another study, which included 29 normal subjects between the ages of 21 and 23 years, only platelet aggregation was tested before and after the administration of a single dose of 650 mgm of acetaminophen. In both studies, informed consent was obtained from all subjects after the nature of the procedures was fully explained.

Five different types of platelet function tests were used. The bleeding time was measured in minutes by the method of Ivy *et al.*[6, 7] Platelet adhesiveness was determined in percent by the modified glass bead method of Bowie *et al.*[8] Clot retraction was measured according to the technique described by Diggs;[9] percent serum retention in the clot was used for data analysis.

Platelet factor 3 (PF_3) availability was tested using the method of Penner by incubating 0.1 ml of plasma containing 50,000 platelets/mm^3 for ten minutes with 0.1 ml kaolin (1.5g/100 ml veronal buffer, ph 7.35) and 10 μl epinephrine (1 : 1000 solution) and then performing a recalcification time by adding 0.1 ml of $CaCl_2$ (0.025M). An increase in recalcification time indicated decreased availability. Platelet aggregation was studied by the method of Born and Cross.[10] Venous blood was collected in siliconized vacutainer tubes with nine volumes of blood to one volume of sodium citrate (3.8%), and the platelet rich plasma was tested in a Chrono-Log Aggregometer with adrenalin and collagen. In analyzing data the maximum aggregation as measured by the decrease in optical density expressed in percent was used for adrenalin aggregations. The slope as defined by Stuart[11] was measured for collagen aggregation in order to evaluate the rate of change in optical density with this aggregating agent.

Data were first analyzed in a manner to produce descriptive statistics for the control values of the platelet function tests. The experimental design provided a test of the significance of the difference between pre- and post-tests of platelet function which occurred as effects of various drug regimens. For each drug regimen studied, a t test for paired samples[12] was applied to the mean difference between pre- and post-treatment values for each of the platelet function tests to determine if statistically reliable changes in platelet function test values occurred. Preselected levels of significance ($p < .05$ and $p < .01$) were used to test the hypothesis that no changes occurred as a function of drug administration.

Results

Means, standard deviations and ranges were determined for all control platelet function tests done during the study. Results are shown in Table 2.

Glass Adhesiveness and Serum Retained in Clot

Mean glass adhesiveness for control samples was 82.9% with a standard deviation of 9.6% and a range from 53% to 98%. Mean serum retained in clot was 17.6% with a standard deviation of 4.4% and a range of 8.5 to 29.9%. When the *t* test for paired samples was applied to the mean differences between control and treatment values for glass adhesiveness and serum retention in the clot, there was no significant effect of any regimen except that of AP_1, which produced a decrease in serum retention in the clot as shown in Table 3. Since this effect was minimal and was not demonstrated with AP_2, it was concluded that there were no significant changes in these two platelet function tests produced by the antiplatelet drug regimens included in this study.

Twenty-two normal subjects were studied with platelet function tests before and after the administration of various regimens of aspirin, dipyridamole and ibuprofen. The results show that platelet aggregometry, bleeding time and PF_3 availability should be useful in monitoring patients on antiplatelet regimens and may be of value in understanding the action of such drugs.

The authors are from the Docent Hemostasis Laboratory, University of Missouri School of Medicine.

This study is approved by the Human Experimentation Committee at the University of Missouri-Kansas City and is supported by grants from Boehringer Ingelheim and the Lettie B. McIlvain Trust.

Platelet Factor 3 (PF_3) Availability

Testing of control samples for PF_3 availability gave a mean value of 43.3 seconds with a standard deviation of 4.8 seconds and a range of 32.4 to 58.4 seconds. T test analysis of differences in PF_3 availability showed significant decreases for all drug regimens (Table 4). Although there was significance for the difference noted with dipyridamole 100 mgm (P_4), the magnitude was less than that for other regimens. Thus, minor predictable changes in this test could be anticipated with all of the antiplatelet regimens studied. The greatest difference was with A_4.

Bleeding Time

The mean value for bleeding times in subjects prior to taking drugs was 3.9 minutes, with a

TABLE 2
DESCRIPTIVE STATISTICS OF CONTROL VALUES OF PLATELET FUNCTION TESTS

Test	*N**	*Mean*	*Standard Deviation*	*Range*
Glass adhesiveness (%)	141	82.9	9.6	53-98
Serum retention in clot (%)	143	17.6	4.4	8.5-29.9
PF_3 availability (sec)	131	43.3	4.8	32.4-58.4
Bleeding time (min)	143	3.9	1.1	1.5-7.0
Platelet aggregation				
Adrenalin (%)	172	82.3	6.8	60-99
Collagen slope (mm)	172	48.5	9.6	21-67

* Repeated tests of this study's 22 subjects were made.

TABLE 3
DIFFERENCES FROM CONTROL VALUES FOR GLASS ADHESIVENESS AND SERUM RETENTION IN CLOT FOLLOWING DRUG ADMINISTRATION

Drug Regimen	*N*	*Mean Difference*	*Standard Deviation*	*T-ratio*
Glass Adhesiveness (%)				
A_2	17	1.94	8.92	.84
A_4	18	−2.24	10.07	−.91
P_2	21	−2.95	6.93	−1.90
P_4	21	−2.80	8.08	−1.54
AP_1	20	−1.15	9.49	−.52
AP_2	22	−1.86	11.96	−.71
M	22	−1.81	5.44	−1.52
Serum Retention in Clot (%)				
A_2	18	1.17	3.19	1.51
A_4	19	1.16	5.47	.89
P_2	21	0.04	3.98	.04
P_4	21	−.85	4.92	−.79
AP_1	20	−3.15	5.75	−2.38*
AP_2	22	0.09	5.36	.07
M	22	1.72	4.02	1.96

*$p < .05$

TABLE 4
DIFFERENCES FROM CONTROL VALUES FOR PF_3 AVAILABILITY FOLLOWING DRUG ADMINISTRATION

Drug Regimen	*N*	*Mean Difference (sec)*	*Standard Deviation*	*T-ratio*
A_2	8	4.60	6.00	2.64*
A_4	17	6.00	3.43	6.99†
P_2	21	2.52	3.69	3.05†
P_4	21	1.76	3.70	2.12*
AP_1	20	4.10	4.49	3.98†
PA_2	22	3.45	5.04	3.13†
M	22	3.59	3.82	4.27†

* $P < .05$
† $P < .01$

TABLE 5
DIFFERENCES FROM CONTROL VALUES FOR BLEEDING TIME FOLLOWING DRUG ADMINISTRATION

Drug Regimen	*N*	*Mean Difference (mm)*	*Standard Deviation*	*T-ratio*
A_2	17	3.50	2.37	5.90*
A_4	19	2.87	1.13	10.77*
P_2	22	.36	1.35	1.22
P_4	21	−.30	1.52	−.88
AP_1	20	3.23	1.14	12.35*
AP_2	22	3.93	1.76	10.23*
M	22	1.90	1.92	4.53*

* $p < .01$

standard deviation of 1.1 minutes and a range of 1.5 to 7 minutes. Significant prolongation of the bleeding time was evident with all regimens except P_2 and P_4 (Table 5). The administration of ibuprofen (M) resulted in the least difference of the five regimens which produced significant changes. The differences with aspirin 650 mgm (A_2) were less than with the other regimens which included aspirin.

Fig. 1 shows the relationship of bleeding times in minutes to the accumulated frequency in percent of control tests done before and tests done after the administration of the A_4 and AP_2 regimens. It shows a significant increase in the cumulative percentage of prolonged bleeding times after the administration of these drugs. In a similar way Fig. 2 shows that there was no increase in prolonged bleeding times with the P_4 regimen when compared to control tests. It also shows that the distribution of the increases produced by ibuprofen (M) was different than that produced by the A_4 and AP_2 regimens as shown in Fig. 1.

PLATELET AGGREGATION

With control samples the mean value for platelet aggregation as measured by the increase in optical density with adrenalin was 82.3% with a standard deviation of 6.8% and a range of 60% to 99%. Significant changes in mean values occurred after the administration of all drugs except the P_2 and P_4 regimens and acetaminophen (Table 6). As was found when testing the bleeding time, ibuprofen (M) produced a significant change in adrenalin aggregation. It was of lesser magnitude, however, than that noted with aspirin alone or combinations including aspirin.

After the administration of acetaminophen (AM), the mean value for optical density in percentage with the addition of adrenalin was not significantly different from the mean control value for the 29 subjects. However, there were occasional subjects in which the optical density was decreased as much as 22% from their control values. Thus, if a subject has taken acetaminophen, a study of adrenalin aggregation cannot safely be used to evaluate platelet function or as a control value prior to the administration of antiplatelet drugs.

The mean of the collagen slope values for the control tests was 48.5 mm, with a standard deviation of 9.6 mm and a range of 21 mm to 67 mm. Significant changes in collagen slope were found

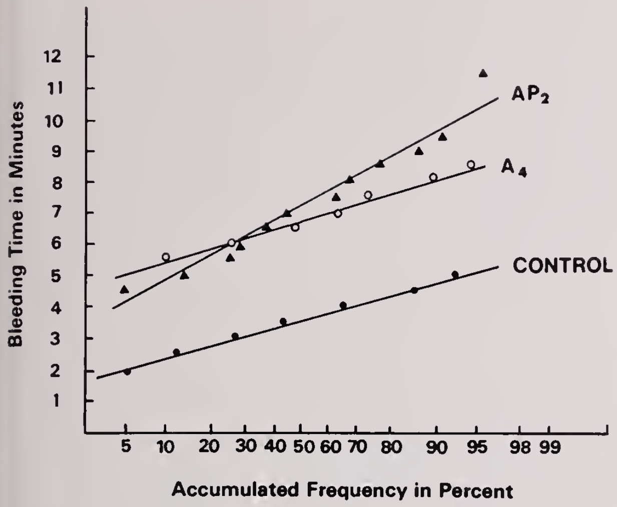


Fig. 1 Distribution on probability paper of the control bleeding times, bleeding times after aspirin 1,300 mgm (A_4) and bleeding times after aspirin 325 mgm and dipyridamole 75 mgm (AP_2).

after the administration of aspirin alone or in combination and after ibuprofen (Table 6). There was little difference in the amount of change produced by the two dosages of aspirin and the two aspirin-dipyridamole combinations. Administration of dipyridamole alone did not produce significant changes in collagen slope values nor was a significant effect seen with acetaminophen (AM). Of the regimens producing significant changes, ibuprofen produced the change of the least magnitude.

Comment

In interpreting data from platelet function tests, it is important to analyze the test results of a significant number of normal subjects. This study has allowed us to determine the range of results in 22 normal subjects studied on multiple occasions using a variety of platelet function tests. The range did not appear to be different for the small group of subjects who were taking oral contraceptives. `Mean values and standard deviations, determined for the methods described, can be useful in evaluating test results in individual patients who are receiving antiplatelet drugs by allowing comparison with established results found in normal subjects when not taking such drugs. The range of predictable changes in normal subjects after receiving antiplatelet drugs may also be useful in detecting suboptimal changes after the administration of such drugs to patients as well as in monitoring drug compliance.

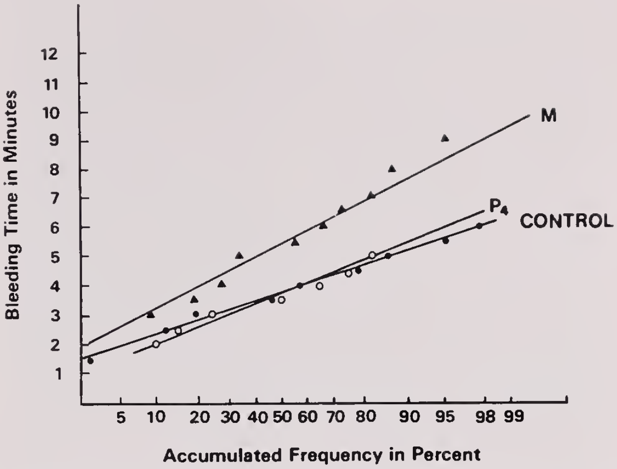


Fig. 2 Distribution on probability paper of the control bleeding times, bleeding times after ibuprofen 400 mgm (M) and bleeding times after dipyridamole 100 mgm (P_4).

TABLE 6
DIFFERENCES FROM CONTROL VALUES FOR PLATELET AGGREGATION FOLLOWING DRUG ADMINISTRATION

Drug Regimen	*N*	*Mean Difference*	*Standard Deviation*	*T-ratio*
Adrenalin				
A_2	18	−46.69	11.47	−16.78*
A_4	19	−50.09	8.76	−24.25*
P_2	22	−2.00	6.35	−1.44
P_4	20	−1.55	8.99	.75
AP_1	20	−42.70	12.65	−14.71*
AP_2	22	−35.50	10.20	−15.91*
M	22	−31.1	15.88	−8.97*
AM	29	1.31	8.03	.86
Collagen Slope (MM)				
A_2	18	−31.55	10.01	−12.99*
A_4	19	−31.84	8.23	−16.41*
P_2	22	−4.32	9.59	−2.05
P_4	21	−.23	8.37	−.12
AP_1	20	−35.05	11.54	−13.23*
AP_2	22	−33.40	11.21	−13.65*
M	22	−21.90	14.01	−7.16*
AM	29	−3.03	11.62	−1.37

* $p < .01$

Analysis of our data has shown that glass adhesiveness and clot retraction as measured in this study are two platelet function tests which are not altered by the administration of any of the drugs studied. Therefore, such testing would not be useful in evaluating drug effectiveness or drug compliance in patients for whom these drugs are prescribed. Our findings indicate that either platelet functions measured by these tests are not altered by the in vivo administration of the drugs studied or the tests are not sensitive enough to detect changes which occur.

Decreases in PF_3 availability, while not of great magnitude, were produced by all drugs studied.

Since PF_3 becomes available on platelet membranes during the coagulation process, it is not unexpected that drugs which have been found to be potentially useful as platelet inhibitors in man do produce changes in the characteristics of their membranes. Such effects could be produced by acetylation of the platelet membrane proteins by aspirin.[13] Aznar and Valles[14] report that dipyridamole, when incubated with platelets in vitro, produces alterations in the phospholipid content of platelet membranes. They also assert that aspirin in vitro as well as in vivo reduces the membrane content of sphingomyelin. To our knowledge, the effect of ibuprofen on platelet membranes has not been studied but may be similar.

Significant increases were found in bleeding times and significant decreases in platelet aggregation occurred with the administration of aspirin and aspirin combinations. Aspirin is known to inhibit the effect of collagen on platelets, and the prolongation of the bleeding time has been found to be proportional to changes in slope and degree of collagen aggregation.[15] Comparable changes in these two parameters as reported in this study would be expected with these drugs. Aspirin probably acts as an active-site acetylating agent which inhibits cyclooxygenase in platelets,[16] thus blocking the formation of prostaglandins which induce the release reaction. The lower dose of aspirin (650 mgm) produced less effect on the bleeding time than the higher dose (1300 mgm), though effects on adrenalin and collagen aggregation were equivalent for both doses. This suggests that the higher dose of aspirin may produce changes other than those related to the inhibition of the platelet release reaction, possibly in the vessel wall. In one study,[17] a significant decrease in postoperative venous thrombosis was achieved with 3,600 mgm aspirin per day, but not with 960 mgm aspirin per day. A recent review by Jobin[18] evaluates the cumulative experience concerning the effects of aspirin on hemostasis and thromboembolism to date.

Dipyridamole, when used alone in the doses tested, produced no demonstrable effect on bleeding time or platelet aggregation. There is good experimental evidence that this drug is a potent inhibitor of the interaction of platelets with damaged sites on vessel walls. At least one of its effects is to increase cyclic AMP in platelets and thus inhibit the release reaction. It produces a differential inhibition of the phosphodiesterases of cyclic AMP and cyclic GMP.[19] It has also been reported to inhibit platelet adhesion to collagen and to subendothelial structures.[3] Born *et al*[20] suggested that dipyridamole might inhibit platelets indirectly by reducing ADP release from erythrocytes which have been reversibly deformed in the circulation. In pharmacologic doses such as those used in this study, dipyridamole appears to be bound to an alpha$_1$-acid glycoprotein in the circulating blood, and thus may not be available to produce an effect on platelet function.[21] Acetylation of this glycoprotein by aspirin could make more dipyridamole available when these drugs are used in combination. Honour *et al*[22] reported that aspirin (42 mgm/day) given orally at the same time as dipyridamole in single daily oral doses reduced the level of dipyridamole required from 12.5 mgm to 6 mgm for reversal of alloxan-induced sensitivity to ADP in injured pial arteries of rabbits. The doses used in this experimental model were equivalent on a body weight ratio to the AP_2 regimen used in our study and to those being used in the current Persantin-Aspirin Reinfarction Study.[23] Clinically, these drugs have been found to potentiate each other in inhibiting thrombosis involving small vessels[24] and in prolonging platelet survival.[25] In our study, any additional effect produced by giving the two drugs in combination was not apparent from changes in any of the platelet function tests. Since the testing was all done in normal subjects without abnormal vessels, the lack of effect on tests when dipyridamole was administered alone or in combination with aspirin does not negate such reported clinical effectiveness.

Flurbioprofen, a drug which is similar to ibuprofen, has been found to inhibit collagen-induced platelet aggregation in man and to prevent death from pulmonary embolism after the injection of collagen in animals.[26] Its mode of action may be different from that of aspirin. With the doses of ibuprofen used in this study, changes produced in platelet function tests were of less magnitude than those found with aspirin and aspirin combinations. For most subjects acetaminophen had no significant effect on aggregation. In a few, however, there was a modest decrease in both adrenalin and collagen aggregation, which may be important in interpreting baseline testing in patients who are taking this drug.

REFERENCES

1. Gallus, A. S. and Hirsh, J.: Antithrombotic Drugs: Part II. Drugs 12:132-157, 1976.
2. Weiss, H. J.: Antiplatelet Drugs — A New Pharmacologic Approach to the Prevention of Thrombosis. Am. Heart J. 92:86-102, 1976.
3. Packham, M. A. and Mustard, J. F.: Clinical Pharmacology of Platelets. Blood 50:555-573, 1977.

4. Fuster, V. and Didisheim, P.: Platelet Function Inhibitors: Their Clinical Use. Adv. Intern. Med. 23:251-264, 1978.
5. Didisheim, P. and Fuster, V.: Actions and Clinical Status of Platelet-Suppressive Agents. Semin. Hematol. 15:55-72, 1978.
6. Ivy, A. C., Shapiro, P. R. and Melnick, P.: The Bleeding Tendency in Jaundice. Surg. Gynecol. Obstet. 60:781-784, 1935.
7. Ivy, A. C., Nelson, D. and Bucher, G. R.: The Standardization of Certain Factors in the Cutaneous "Venostasis" Bleeding Time Technique. J. Lab. Clin. Med. 26:1812-1822, 1941.
8. Bowie, E. J., Thompson, J. H., Didisheim, P. *et al:* Mayo Clinic Laboratory Manual of Hemostasis. Philadelphia, W. B. Saunders Co., 1971, p. 43.
9. Diggs, L. W.: Observation of the Clot. Memphis Mid South Med. J. 37:381, 1962.
10. Born, G. V. R. and Cross, M. J.: The Aggregation of Blood Platelets. J. Physiol. (London) 168:178-195, 1963.
11. Stuart, R. K.: Platelet Function in Human Beings Receiving 300 mg of Aspirin per Day. J. Lab. Clin. Med. 75:463-471, 1970.
12. Colton, T. C.: Statistics in Medicine. Boston, Little, Brown and Co., 1974.
13. Rosenberg, F. J., Gimber-Phillips, P. E., Groblewski, G. E. *et al:* Acetylsalicylic Acid: Inhibition of Platelet Aggregation in the Rabbit. J. Pharmacol. Exp. Ther. 179:410-418, 1971.
14. Aznar, J. and Valles, J.: Effect of Dipyridamole on Human Platelet Phospholipids. Experientia 32:644-645, 1976.
15. Hirsh, J., Street, D., Cade, J. F. *et al:* Relation Between Bleeding Time and Platelet Connective Tissue Reaction After Aspirin. Blood 41:369-377, 1973.
16. Roth, G. J., Stanford, N. and Majerus, P. W.: Acetylation of Prostaglandin Synthase by Aspirin. Proc. Natl. Acad. Sci. USA 72:3073-3076, 1975.
17. McKenna, R., Bachman, F., Galante, J., Kaushal, S. P. and Meredith, P.: Prospective Trial of Aspirin and Phlebo-dynastat in the Prevention of Thromboembolic Disease. Blood 48:977, 1976 (Abstract).
18. Jobin, F.: Acetylsalicylic Acid, Hemostasis and Human Thromboembolism. Semin. Thromb. Hemostats. 4:199-240, 1978.
19. McElroy, F. A. and Philip, R. B.: Relative Potencies of Dipyridamole and Related Agents as Inhibitors of Cyclic Nucleotide Phosphodiesterases: Possible Explanation of Mechanism of Inhibition of Platelet Function. Life Sci. 17:1479-1494, 1975.
20. Born, G. V. R., Bergquist, D. and Arfors, K. E.: Evidence for Inhibition of Platelet Activation in Blood by a Drug Effect on Erythrocytes. Nature 259:233-235, 1976.
21. Niewiarowski, S., Lukasiewicz, H., Math, N. *et al:* Inhibition of Human Platelet Aggregation by Dipyridamole and Two Related Compounds and its Modification by Acid Glycoproteins of Human Plasma. J. Lab. Clin. Med. 86:64-76, 1975.
22. Honour, A. J., Hockaday, T. D. R. and Mann, J. I.: The Synergistic Effect of Aspirin and Dipyridamole Upon Platelet Thrombi in Living Blood Vessels. Br. J. Exp. Path. 58:268-272, 1977.
23. Douglas, A. S., Chalmers, T. C., Klimt, C. R. and Stamler, J.: Persantin-Aspirin Reinfarction Study. Lancet 2:465-566, 1976.
24. Zacharski, L. R., Walworth, C. and McIntyre, O.R.: Antiplatelet Therapy for Thrombotic Thrombocytopenic Purpura. N. Engl. J. Med. 285:408-409, 1971.
25. Harker, L. A. and Slichter, S. J.: Platelet and Fibrinogen Consumption in Man. N. Engl. J. Med. 287:999-1005, 1972.
26. Nishizawa, E. E., Wynalda, D. J., Suydam, D. E. *et al:* Flurbiprofen, a New Potent Inhibitor of Platelet Aggregation. Thromb. Res. 3:577-588, 1973.

Reprints: Marjorie S. Sirridge, M.D.
Red Unit
University of Missouri School of Medicine
2411 Holmes
Kansas City, Mo. 64108

A simpler food information system could increase the use of nutrition labeling, the American Medical Association has advised U. S. Senator George McGovern (D., S. D.), chairman of the Subcommittee on Nutrition of the Senate's Committee on Agriculture.

"Expanded labeling of food products will aid patients in their efforts to comply with a prescribed dietary regimen or to avoid foods containing substances for which a known intolerance exists," said James H. Sammons, M.D., AMA executive vice-president.

It is virtually impossible to give the exact amount of protein, fat, carbohydrate and other nutrients in each food product, the AMA points out. It would be sufficient for the label to state the average amount of nutrients likely to be encountered by the consumer rather than try to require exact figures for each can or package. With a well-balanced diet, the small variances would average out over a period of time.

More food products could be labeled, said AMA, if government would permit food producers to use the same kind of information that the health professionals use when they plan medical diets. Special medical diets are designed by using standardized nutrition information from published food tables that show average nutrient content.

"Use of average values of nutrients found in food products instead of the current requirement of repetitive and extensive laboratory testing of each individual batch would serve the purpose very well," Dr. Sammons declared.

These comments mark the AMA's most recent effort to try to help make food labels more useful to consumers. Another AMA suggestion is that processed foods should list their ingredients, including added colors. The AMA has also suggested that food labels should contain nutrition information people need to follow medically prescribed diets such as low-sodium diets or weight reduction plans.

In the opinion of AMA, the current system, requiring repeated and very refined analytical tests is expensive and "no doubt deters some members of the industry from undertaking voluntary nutrition labeling." With a modified system similar to a data bank, minimally processed, nonfortified retail foods might be more usefully labeled.

MEDICAL DEFENSE ASSOCIATES, LTD.

says thank you to over 1100 Missouri physicians and:

The Kansas City Times

A Capital Cities Communications, Inc., Newspaper

JAMES H. HALE	MICHAEL J. DAVIES	JAMES W. SCOTT
President and Publisher	Editor	Editor, Editorial Page

MEMBER OF THE ASSOCIATED PRESS
The Associated Press exclusively is entitled to use for
republication all local news published
herein as well as all AP dispatches

Malpractice Panic Eases

Whether it is because of bedpan mutuals, the spectre of an epidemic that never materialized, or health care entities giving more cautious care, massive problems with malpractice insurance premiums have abated though not ended.

Some observers believe that the formation of doctor-owned insurance groups (bedpan mutuals) — a response to the 1975 situation when physicians were faced with as much as a 1,000 percent increase in their insurance premiums — has been a major factor. More than 70,000 physicians participated. Now in some states premiums are going down and doctors are getting dividends from their insurance accounts.

Insurance premiums are still dear, particularly in high-risk specialties, and patients are still suing doctors. But the mass litigation envisioned didn't materialize.

State insurance officials in Missouri and Kansas indicate the situation has eased. In Kansas a legislative package that made malpractice insurance mandatory and available helped; some rates have dropped slightly. In Missouri several physician companies have done well. A major malpractice carrier is again providing coverage for health care providers, at slightly lower rates.

There is some thought that along with the development of doctor-owned insurance companies grew a kind of informal peer monitoring and review that brought built-in constraint against any but the most traditional therapy. Doctors who insured themselves suffered financial consequences of suits against any colleague in their group.

Whether it's one or a combination of possible reasons, surely physicians who pay the premiums and consumers who eventually feel them in increased medical costs are glad. We hope it continues.

We have known this and publicized it for three years after the Missouri State Legislature and Missouri Insurance Division had the foresight to provide the enabling legislation.

Call for quote of our low rates.
1-800-492-7212
417-883-0199

We require no donation or additional investment

MISSOURI MALPRACTICE MANAGERS, 1031 E. Battlefield — Suite 117B, Springfield, MO 65807

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

owell G. Bennett
eltone Hearing Aid Service
18 W. Walnut Street
pringfield, Missouri 65806
417) 866-0551

en Gidley
eltone Kansas City Hearing Aid Service
001A Grand Avenue
ansas City, Missouri 64106
16) 471-1943 (816) 471-4105

eltone Hearing Aid Service
22 Kirkpatrick Building
t. Joseph, Missouri 64501
16) 279-6501

on Hicks
eltone Hearing Aid Service
orth Park Mall
01 Range Line Room 248
plin, Missouri 64801
17) 624-0931

ean Jones
eltone Hearing Aid Service
O. Box 682 400 E. High
efferson City, Missouri 65101
14) 635-3557

eltone Hearing Aid Service
1 North 10th
olumbia, Missouri 65201
14) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Service
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Service
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Service
State Fair Shopping Center
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

Beltone Hearing Aid Service
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Service
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

Beltone Hearing Aid Service
320 Spring
Sweet Springs, Missouri 65351
(816) 335-6727

Beltone
WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

your help is needed by Missouri's future practicing physicians!

The Missouri State Medical Foundation (MSMF) was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

As other loan sources are becoming less available, the Foundation is growing into one of the major sources of loans for aspiring physicians. Send your check today!

Give now to the

MISSOURI STATE MEDICAL FOUNDATION

SPONSORED BY THE
MISSOURI STATE MEDICAL ASSOCIATION
113 Madison St., Jefferson City, Mo. 65102

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 509(a)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

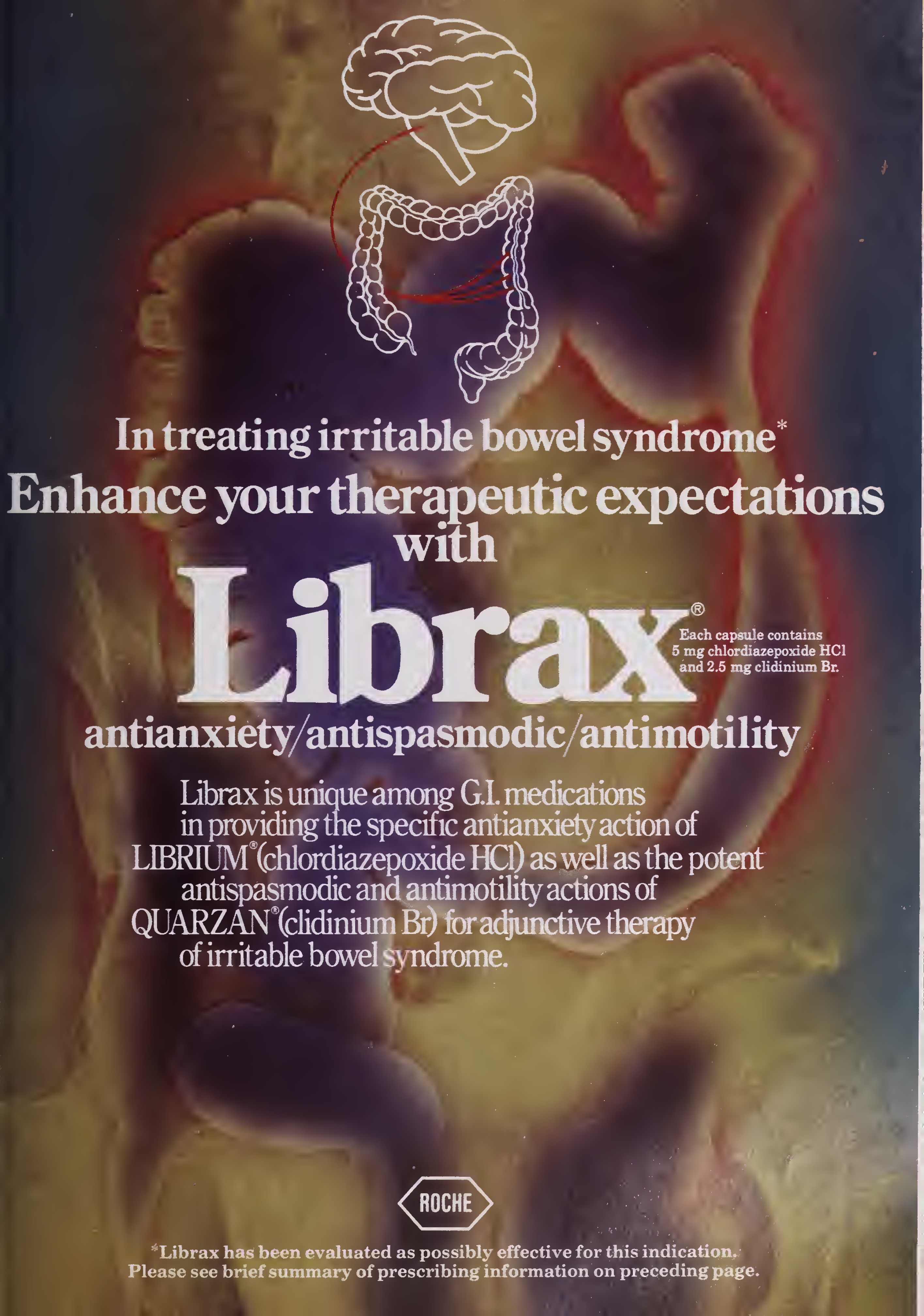
As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

ROCHE

Roche Products Inc.
Manati, Puerto Rico 00701



In treating irritable bowel syndrome*

Enhance your therapeutic expectations with Librax®

Each capsule contains
5 mg chlordiazepoxide HCl
and 2.5 mg clidinium Br.

antianxiety/antispasmodic/antimotility

Librax is unique among G.I. medications in providing the specific antianxiety action of LIBRIUM® (chlordiazepoxide HCl) as well as the potent antispasmodic and antimotility actions of QUARZAN® (clidinium Br) for adjunctive therapy of irritable bowel syndrome.

ROCHE

*Librax has been evaluated as possibly effective for this indication.
Please see brief summary of prescribing information on preceding page.

The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

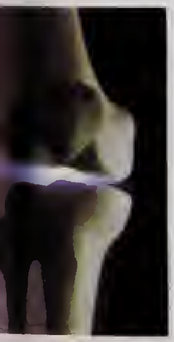
The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions.
However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).

© 1978 The Upjohn Company

RHEUMATOLOG



Motrin 400 TABLETS mg
ibuprofen, Upjohn

The confidence that comes from experience—
one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

J-6857-4

The confidence that comes from experience—
one more reason to prescribe

Motrin 400 mg TABLETS
ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.
Drug interactions. *Aspirin* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.
Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

How Supplied

Motrin Tablets, 300 mg (white)	
Bottles of 60	NDC 0009-0733-01
Bottles of 500	NDC 0009-0733-02
Motrin Tablets, 400 mg (orange)	
Bottles of 60	NDC 0009-0750-01
Bottles of 500	NDC 0009-0750-02
Unit-dose package of 100	NDC 0009-0750-06
Unit of Use bottles of 120	NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

NIM-3

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001

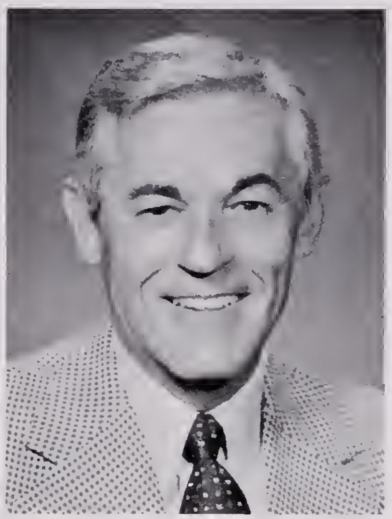
ALDOMET®
(METHYLDOPA | MSD)
TABLETS: 500 mg, 250 mg, and 125 mg
MSD
MERCK
SHARP &
DOHME

President's Message

Another year, another president and the MSMA has survived. We survived Jimmy, Billy and Joe . . . make that two Joes.

This was a year in which I tried to follow Pearson's Postulate, "It requires a very unusual mind to make an analysis of the obvious."

My many thanks to you, the members of the MSMA, for giving me the honor of being president of an organization of which I am truly proud. To the MSMA staff, my thanks for putting up with me. Little did you realize how long this year would be.



John N. Martin, M.D.

As Booth Tarkington said, "Cherish all your happy moments; they make a fine cushion in your old age."

To me, it was a year to remember, an experience, a joy. And, to top it off, I had a great time, made some friends, met some wonderful people. As has been said, "Satisfaction is, in itself, success."

The MSMA staff has been through many a year with a new guy to guide, advise and help. That they did, and so the MSMA survived another year. To that fine MSMA staff, my many thanks.

It was a year I did not live by the Tarnished Golden Rule, "Do unto others before they do unto you."

Only had one hope for the year and that was that Missouri physicians would support the three Ms — the MSMA, MOMEDICO and MMPAC. I hope you will continue with even more support in the coming years.

This also was the year I followed Boren's Laws:

1. When in doubt, mumble.
2. When in trouble, delegate.
3. When in charge, ponder.

If you want your say, remember that the MSMA House of Delegates, the MOMEDICO board and your PAC board meet during the annual session in St. Louis and you are all invited. So, say your piece. Sometimes, I think Sheetz was right when he said, "The way some people find fault, you'd think there was a reward."

Sevareid's Law says, "The chief cause of problems is solutions." I hope a few things we've tried this year will be of help in the future. The Impaired Physician Program needs more publicity. The liaison meeting with the other health associations has great promise. We all have problems, but we in the health care field need to communicate with each other more and more to try to find those solutions.

Enough of that. Maybe a few "curettings" to fill the page:

I don't know about your town, but in mine, the street commissioner doesn't drive a car. So, what does he know about pot holes?

I was proud of myself this year. I didn't buy any stock in the company that made Billy Beer.

Always thought "negotiation" was the sensible way until Jimmy Carter negotiated away five billion of our dollars.

When they got the new computer, I told the MSMA staff, "If computer dating fails, just trust to lust."

I've always believed in Frank's Law, "Sex is a misdemeanor. The more you miss, da' meaner you get."

Bureaucrats know only one answer — "There's no special reason; it's just government policy."

Urologist's advice is "Don't get into a peeing contest with a skunk."

This was the year that was.

As president of the MSMA, I remember April '78:

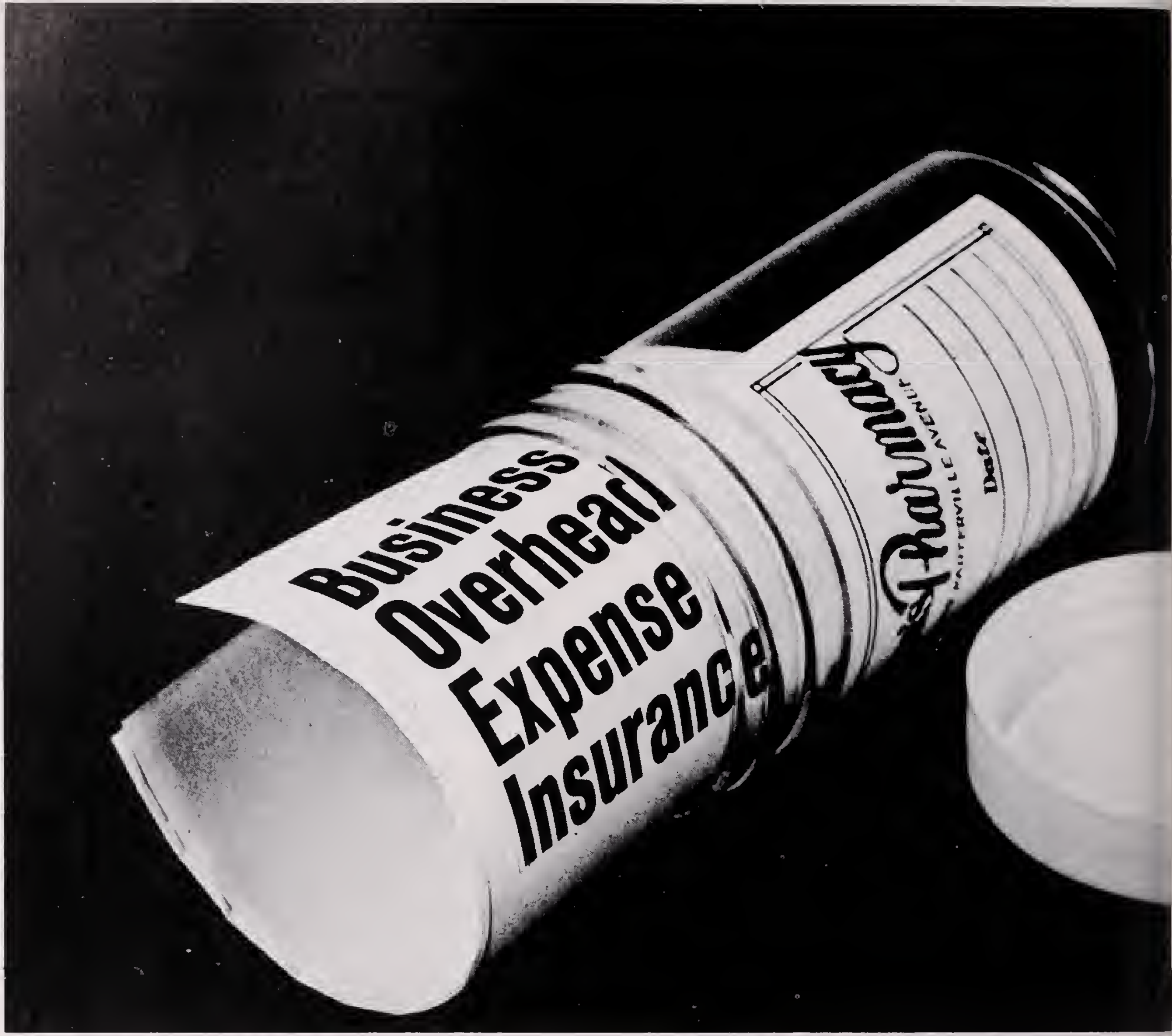
I wish that my room had a floor.
I don't so much care for a door,
But this walking around
Without touching the ground
Is getting to be quite a bore.

And, then April '79 and to all a toast:

Here's a toast to the future,
A toast to the past
And a toast to our friends far and near.
May the future be pleasant,
The past a bright dream
May our friends remain faithful and dear.

To Andy McCanse, president for 1979-1980, my congratulations and best wishes. I pledge to you and the MSMA my whole-hearted support.

"30"



A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance
Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

MSMA Auxiliary

One year ago, I was literally "quaking in my boots" when I sat down at my typewriter to wait for an inspiration for my first message for Missouri Medicine. After many attempts and assistance from my husband, my first page appeared. Could I have known then what I know now, there wouldn't have been enough space for all that I would like to have said during this past 12 months.

Mrs. A. J. Campbell
President

First, my year as president of the MSMA Auxiliary has been one of the most rewarding of my life. Friendships made will be lasting. It has been a true pleasure to see new life come into our auxiliary while we still lean on the advice and knowledge of our previous leaders.

My goals for the year were (1) to visit every organized county auxiliary in the state, (2) to increase our membership, (3) to have our members become as active and effective in assisting in legislative efforts as the Association felt that we should be, (4) to continue our outstanding CPR program; (5) to continue our immunization efforts and (6) to find ways in which the Auxiliary might help to hasten the implementation of "911" in Missouri.

1. I realized my first goal when I recently visited our "Kingdom of Callaway" Auxiliary in Fulton. I have visited every organized county auxiliary in Missouri and in two areas in which I believe auxiliaries should be formed. It also was rewarding to visit many members-at-large.

2. The MSMA Auxiliary has gained almost 200 new members. I regret that the total membership total has not increased. However, we are confident that our excellent Auxiliary "new member brochure," which the Association has made possible, will get our story to prospective new members and attract their membership. Since "retention" seems to be the main area of concern right now, we again look to the MSMA members to encourage your spouses to continue their auxiliary memberships or to join.

3. We have worked hard to provide an Auxiliary legislative contact person for every representative and senatorial district in which our members reside. Our list is not complete, but I'm confident we have provided a solid foundation upon which to build in the coming year.

4. The Auxiliary's CPR program has played an important role in Missouri and is running ahead of projections. The auxiliaries are still actively encouraging CPR training. We thank Mrs. W. Jack Stelmach, immediate past-president, and the Cape Girardeau Auxiliary for this successful project.

5. We have continued our efforts regarding immunization with the Missouri Division of Health. This year, we will distribute a "color book" for pre-school children to encourage immunization of this age group.

6. The "911" number is still on the drawing board in many communities. The Auxiliary has made an effort to create awareness of this vital program, but the results may not be realized in the immediate future.

Again, I thank the MSMA for your support of our auxiliary and its programs.

I hope that this 1978-1979 year will be marked as a link in the important changes that will appear down the road and extend my best wishes for a successful MSMA Auxiliary year in 1979-1980.

EDITORIAL

LET'S AVOID THE FACTORS THAT HAVE DAMAGED LABOR'S POLITICAL CLOUT

Our AMA federation must shun the internal damage that has made organized labor much less effective in Washington, D. C. than the publicity accorded its leaders might suggest.

"Big labor isn't very big anymore," liberal syndicated columnist Nicholas von Hoffman wrote in the December issue of *Harper's*. He added, "The labor lobby has come down with pernicious anemia."

He further said:

"Without a kick in the pants of the kind unions can no longer deliver, labor must suffer increasing rejection from the national government. The last session of Congress (1978) saw organized labor lose almost everything it wanted, in particular the labor-law reform bill. . . ." That bill would have eased the unions' organizing efforts.

As the primary reason for the loss of clout, von Hoffman cites the falloff in union membership to only about 20 % of the labor force. "Since 1974, unions have lost more than half a million members, while in the same period the economy added six million new jobs."

The lack of unity in the union movement could well be an additional reason, we believe. For example, the only three unions with more than a million members (according to the 1978 *World Almanac*) — the Teamsters, United Auto Workers and National Education Association — are unaffiliated with the AFL-CIO.

In contrast with organized labor, the AMA has been effective in Congress and has improved its relations with the White House. To remain effective, however, our federation must grow in its proportion of the total number of physicians and in unified membership.

In the 1977-1978 Congress, our federation was instrumental in the demise of such offensive bills as:

- A bill to extend Federal Trade Commission jurisdiction to nonprofit organizations, which would include the AMA, its component societies and medical specialty societies. Along with eliminating Congres sional sanction of the FTC's current anti-trust actio against physician solicitation of patients, the bill' death is likely to help us if the FTC administrativ judge's adverse ruling on the issue has to be carried a far as the federal courts.
- A Health Planning Act amendment that woul have extended certificate-of-need provisions to purchase of new equipment by physicians' offices.
- Mandatory cost containment, as contrasted wit the Voluntary Effort spearheaded by the AMA, th American Hospital Association and the Federation o American Hospitals with splendid support from thei state bodies.
- The proposed Clinical Laboratory Improvemen Act, which would have set national standards for th training of laboratory technicians and harassed laboratory procedures in many physicians' offices.
- The drug regulation reform bill, which woul have further muddled the development, distributio and use of beneficial drugs.

Let's sustain our impact. And let's all work for th membership growth and unity that are needed to sustain it.

DO IT TODAY!

Remember that your contribution to the MSMF is tax-deductible. This coupon is for your convenience.

TO: MISSOURI STATE MEDICAL FOUNDATION
P.O. Box 1028, Jefferson City, Mo. 65102

I enclose my donation of $.......... for the MSMF STUDENT LOAN FUND.

NAME ....

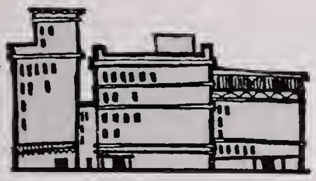
ADDRESS ....

....

....

Please Make Checks Payable to Missouri State Medical Foundation.

★ Another popular custom is to include a bequest to the Missouri State Medical Foundation in your last will and testament.



NEWS
From the Medical Schools

ST. LOUIS UNIVERSITY

An article written by *David R. Challoner*, M.D., dean of the School of Medicine, and *David R. Perry*, M.A., assistant dean for planning and operations at the School, was recently published in the prestigious *New England Journal of Medicine*.

"A Rationale for Continued Federal Support of Medical Education" was the title of the article, which was rewritten and condensed by United Press International office in Boston for release on the UPI's national wire.

Dr. Challoner and Mr. Perry cited declining federal subsidies to medical schools and sought to show reasons for a continued federal role in support of medical education.

"The appropriate federal role is conceived as being the ultimate guarantor of financial access to the medical-education system by otherwise qualified students, perfecting the market for human-capital investment," they wrote.

Part of the problem, they wrote, was the "general uneasiness over the social equity of public subsidy of a high-earnings, professional group." According to the authors, however, this was not a cause for alarm but should be seen as a strategic opportunity to synthesize a new and more durable plan for an appropriate federal role in support of medical education."

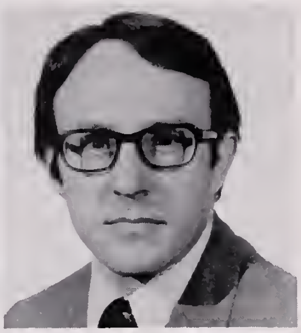
The Medical Air Rescue Corps (MARC), which is based at St. Louis University Hospitals and went into service on March 1, is prepared and equipped to answer any emergency and medical need in a 100 mile radius of St. Louis.

Available 24 hours a day, the MARC helicopter can be called by Missouri and Illinois physicians, law enforcement and fire officials, ambulance services, industrial safety officers and other public health and safety agencies within the service area.

The helicopter is intended to be used for not only transportation and care of the severely ill or injured from a trauma site but, also for hospital-to-hospital transfer of patients of all ages, including critically ill newborns.

The MARC program was instituted by St. Louis University Medical Center without any federal grants and has received the cooperation of both Missouri and Illinois law enforcement agencies.

Dr. Challoner



Dr. Perry

UNIVERSITY OF MISSOURI-COLUMBIA

Robert B. Smith, hospital director at the University of California Medical Center at Davis (UDC) since 1975, has been appointed hospital director at the University of Missouri-Columbia (UMC). He replaces *Joe Greathouse* who resigned last December.

UMC Chancellor Barbara S. Uehling said Smith's appointment is effective on April 15.

Greathouse left the University of Missouri to become executive director of Iowa's Health System Agency. *Jack Horn* has been serving as acting director.

Smith, 42, also is associate dean of UC Davis' medical school as well as director of hospital and clinics for the medical center. A native of Downey, Calif., he attended both Long Beach City College and Los Angeles Valley College before receiving a B.S. degree in business administration from California State University, Northridge, in 1963. He received a master of business administration from Cal State, Long Beach, in 1970 and completed Ohio State University's graduate certificate program in hospital and health services administration in 1978.

Smith moved to UC Medical Center at Davis in May, 1975 to head its 450-bed teaching hospital which has an annual operating budget of $70 million and 3,000 employees, with a full-time clinical faculty of 100. For the past four years, he has been responsible for the hospital's programs, services and operations. All are financed by hospital revenues. He also has had academic appointment in UCD's School of Medicine and serves on the faculty executive committee and the school's admissions committee.

Robert Patrick Burns, M. D., currently professor of ophthalmology at the University of Oregon Health Sciences Center, has been appointed professor and chairman of the Department of Ophthalmology in the School of Medicine and will assume his new duties on April 1.

In addition to the University appointment, Dr. Burns will also serve as medical and research director of the Eye Research Foundation of Missouri, Inc., a private institution in Columbia affiliated with the UMC Medical Center for training young physicians specializing in the diagnosis and treatment of eye diseases.

Dr. Burns received his M.D. degree at the University of Oregon and did his residency training in ophthalmology at the College of Physicians and Surgeons at Columbia University in New York City.

Richard A. Finkelstein, Ph. D., professor of microbiology at the University of Texas Southwestern Medical School, has been appointed professor and chairman of microbiology at the School of Medicine and will assume his duties on July 1.

Recognized as one of the world's foremost bacteriologists, Dr. Finkelstein is a researcher in the pathogenesis and immunology of cholera, an international health problem of often pandemic proportions. In recent years, his accomplishments in cholera research have won for him the prestigious Koch Award, an honor presented annually by the German government to an outstanding world scientist. He also has extensively investigated and published findings on the pathogenesis and immunology of gonorrhea and has studied E. coli, the bacteria that causes "traveler's disease."

UNIVERSITY OF MISSOURI-KANSAS CITY

Dr. E. Grey Dimond, provost for health sciences during the past decade, will become a special consultant to Chancellor George A. Russell on July 1, 1979.

Guiding the University of Missouri-Kansas City School of Medicine (UMKC) through its planning stages and the first eight years of its existence, Dr. Dimond developed the concept of a program that accepts students directly from high school and enables them to earn combined B.A./M.D. degrees in just six years. The program is now widely accepted.

In his new position, Dr. Dimond will provide liaison between the UMKC and the Truman Medical Center as well as other health-related agencies. He also will serve the chancellor in the transition to UMKC's new administrative organization.

A graduate of Indiana University, Dr. Dimond studied cardiology under Dr. Paul Dudley White at Massachusetts General Hospital. In 1971, he and Dr. White made headlines as the first American physicians to enter the People's Republic of China in 25 years.

A new organization, Friends of the UMKC Medical School, has been formed by parents of medical students from the St. Louis area. Several projects are planned. Among them are a prize for research to eligible Year V students and a fall lectureship.

The group will visit the School of Medicine on April 28-29 for two days of informative meetings with students and faculty. Chancellor Russell, Provost Dimond, Associate Provost Mitchell and Dean Harry Jonas will join the parents in their final session Sunday to discuss student services and opportunities.

The following faculty members were awarded University of Missouri-Kansas City Faculty Research Grants as follows:

Dr. Louise Arnold, "Clinical Performance of Medical School Graduates as Evaluation in Medical Education"; *Dr. Norman Estes*, "Evaluation of Nuclear Estrogen Receptors as a Guide to Hormonal Therapy in Metastatic Breast Carcinoma"; *Dr. John Fales*, "Total Energy Production and Efficiency of Skeletal Muscle"; *Dr. Anthony Hancock*, "Cyclic Phosphatidylethanolamine Analogs: Their Interaction with Phospholipase A_2"; *Dr. Rona Hirschberg*, "Calcium Transport in Chlamydomonas and Its Role in Photography"; *Dr. Ron MacQuarrie*, "Preparation and Properties of a Variant Form of Adenosine and Deaminases"; *Dr. Jack Mulligan*, "Toward More Cost-Effective Patient Care in Offices and Clinics Through Medical Education"; *Dr. Kyle Peterson*, "Dominant Lethal and Teratogenic Effects of Alcohol on Inbred Strains of Mice"; *Dr. Frank Popp*, "Reissert Compounds Derived from Diaza Systems"; *Dr. Garth Resch*, "Endocrine Control of Blood Glucose During Hypothermia and Rewarming"; *Dr. Bernard Rice*, "Roll of Vitamin D in Hypercalcemia and Neoplastic Disease"; and *Dr. James Schaeffer*," Studies on Orientation of Erythrocyte Membrane Proteins."

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in Missouri Medicine. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
***Contact:* Loretta Giacoletto**

March-May	Internal Medicine Review (Weekly, day TBA) (Steinbert Auditorium, The Jewish Hospital)
May 31	Newborn Metabolic Problems
Nov. 9-11	Sixth Annual Symposium: Anesthesia and the Geriatric Patient

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
***Contact:* Erich W. Pollak, M.D., F.A.C.S., Director of Surgical Education**

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds
First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 454-2291
***Contact:* Ronald G. Evens, M.D.**

May 14	City-Wide Radiology Conference: Radiology of the Temporomandibular Joint

Kansas City Society of Ophthalmology and Otolaryngology
30306 Gillham Rd., Kansas City 64108
(816) 531-8432
***Contact:* Ron Cosens, Executive Director**

Dec. 6-7	Annual Clinical Meeting

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

May 3-5	Seminar: Update in Obstetrics and Gynecology
May 17-18	Surgical Problems—Old and New
June 7-8	Symposium: Physical Fitness

Missouri Chapter, American College of Surgeons
Box 1268, Columbia 65205
(314) 449-4518

June 22-23	Annual Professional Meeting (Alameda Plaza, Kansas City)

Baptist Memorial Hospital
6601 Rockhill Rd., Kansas City 64131
(816) 361-3500 (Ext. 7230)
***Contact:* Margery B. Hartsock, Director of Public Relations**

May 31	17th Annual Pediatric Seminar — Advances in Pediatrics

St. Joseph Memorial Hospital
3rd Street and 1st Capital Dr.
St. Charles 63301
(314) 946-6811
***Contact:* Gerald J. Duling, M.D., Medical Director**

April 24	Inflammatory Diseases of the Intestine (7:30 AM)
April 26	Tumor Board
May 3	Tumor Board
May 8	Radionucleotide Scanning
May 10	Tumor Board
May 15	Pathologists' Seminar
May 17	Tumor Board
May 22	Pacemakers
May 24	Tumor Board
May 31	Tumor Board
June 7	Tumor Board
June 12	Peripheral Vascular Disease
June 14	Tumor Board
June 19	Pathologists' Seminar

In Memoriam

Melvin B. Kirstein, M.D., 4910 Forest Park, St. Louis 63108; a graduate of Indiana University, 1933; member of St. Louis Metropolitan Medical Society; age 68; died Jan. 25, 1979.

John H. Walters, M.D., 1027 Hickory Hill Dr., Columbia 65201; a graduate of Washington University, 1950; member of Boone County Medical Society; age 62; died Jan. 29, 1979.

Henry E. Hampton, M.D., 2345 Pine, St. Louis 63103; a graduate of Meharry Medical College, 1928; member of St. Louis Metropolitan Medical Society; age 78; died Jan. 29, 1979.

John Warren Henderlite, M.D., 3136 Alpen Rose, Apt. A., St. Louis 63115; a graduate of Washington University, 1924; member of St. Louis Metropolitan Medical Society; age 81; died Feb. 4, 1979.

David S. Long, M.D., 202 S. Lexington, Harrisonville 64701; a graduate of Kansas University Medical College, 1910; member of West Central Medical Society; age 95; died Feb. 11, 1979.

John Whiteman, M.D., 206 N. Davies, Gallatin 64640; a graduate of Jefferson Medical College, 1946; member of Jackson County Medical Society; age 66; died Feb. 14, 1979.

Frank G. Mays, M.D., 157 Pottery Rd., Washington 63090; a graduate of Washington University, 1926; member of Franklin-Gasconade-Warren Medical Society; age 77; died Feb. 20, 1979.

Carl H. Brust, M.D., 9034 Cottonwood, Apt. 4, Shawnee Mission, Kan. 66215; a graduate of Kansas University, 1927; member of Jackson County Medical Society; age 80; died Feb. 23, 1979.

Hugh W. Maxey, M.D., Salt River Nursing Home, Shelbina 63468; a graduate of Washington University, 1918; member of Cole County Medical Society; age 86; died March 2, 1979.

Something Missing?

Keeping Patients Comfortable...

When your patient is most relaxed . . . you are most effective.

Patient comfort, along with your comfort, are prime considerations in this examination table.

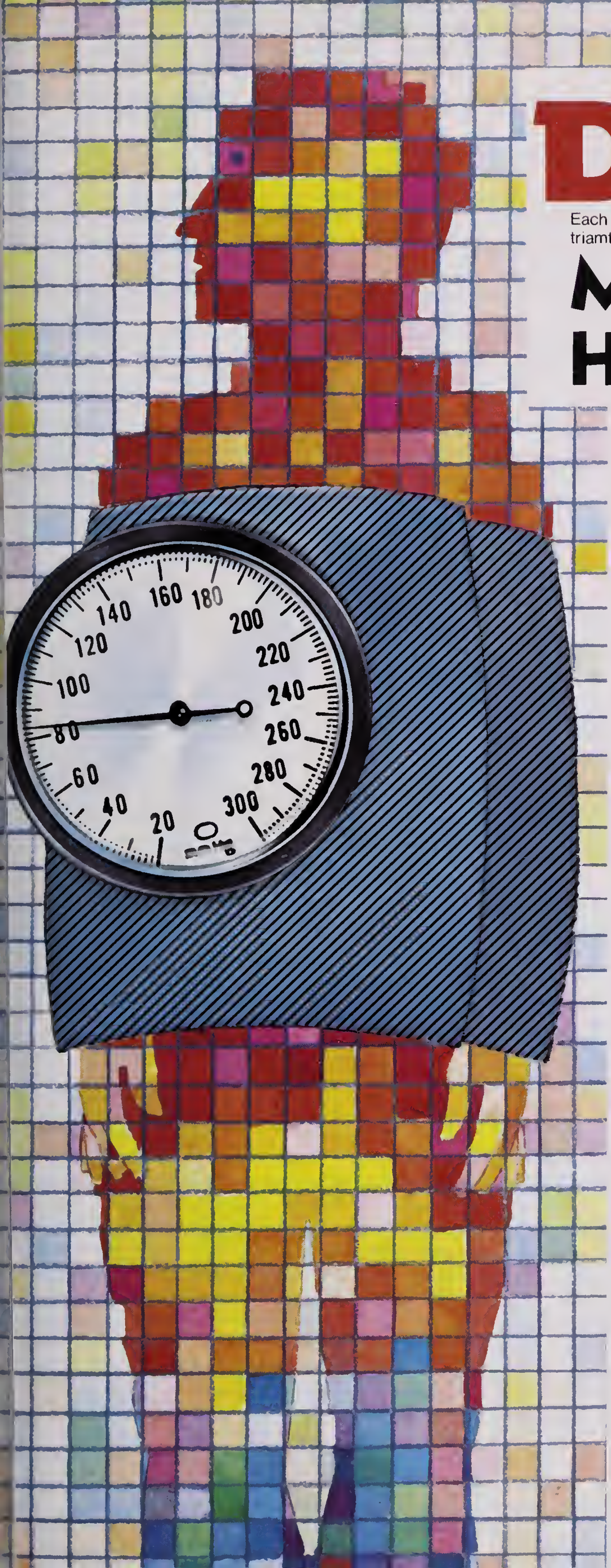
Places patients in the positions best for your work, with least discomfort for you.

Whether you are setting up your first office, or are ready to re-equip . . . whether you lease or buy, with time plans available . . . let Goetze-Niemer's helpful professionals work with you.

GOETZE-NIEMER CO.

- P.O. Box 136—1701 Brooklyn
  Kansas City, MO 64141
  Phone: 816-231-1900
- P.O. Box 187—211 No. 8th
  St. Joseph, MO 64502
  Phone: 816-279-0804
- 2611 West Mill St.
  Springfield, MO 65802
  Phone: 417-865-6511
- Frisco Building
  Joplin, MO 64801
  Phone: 417-624-1040

HOSPITAL AND SURGICAL SUPPLIES—SINCE 1884



Dyazide®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Makes Sense in Hypertension*

Before prescribing, see complete prescribing information in SK&F Co. literature or *PDR*. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

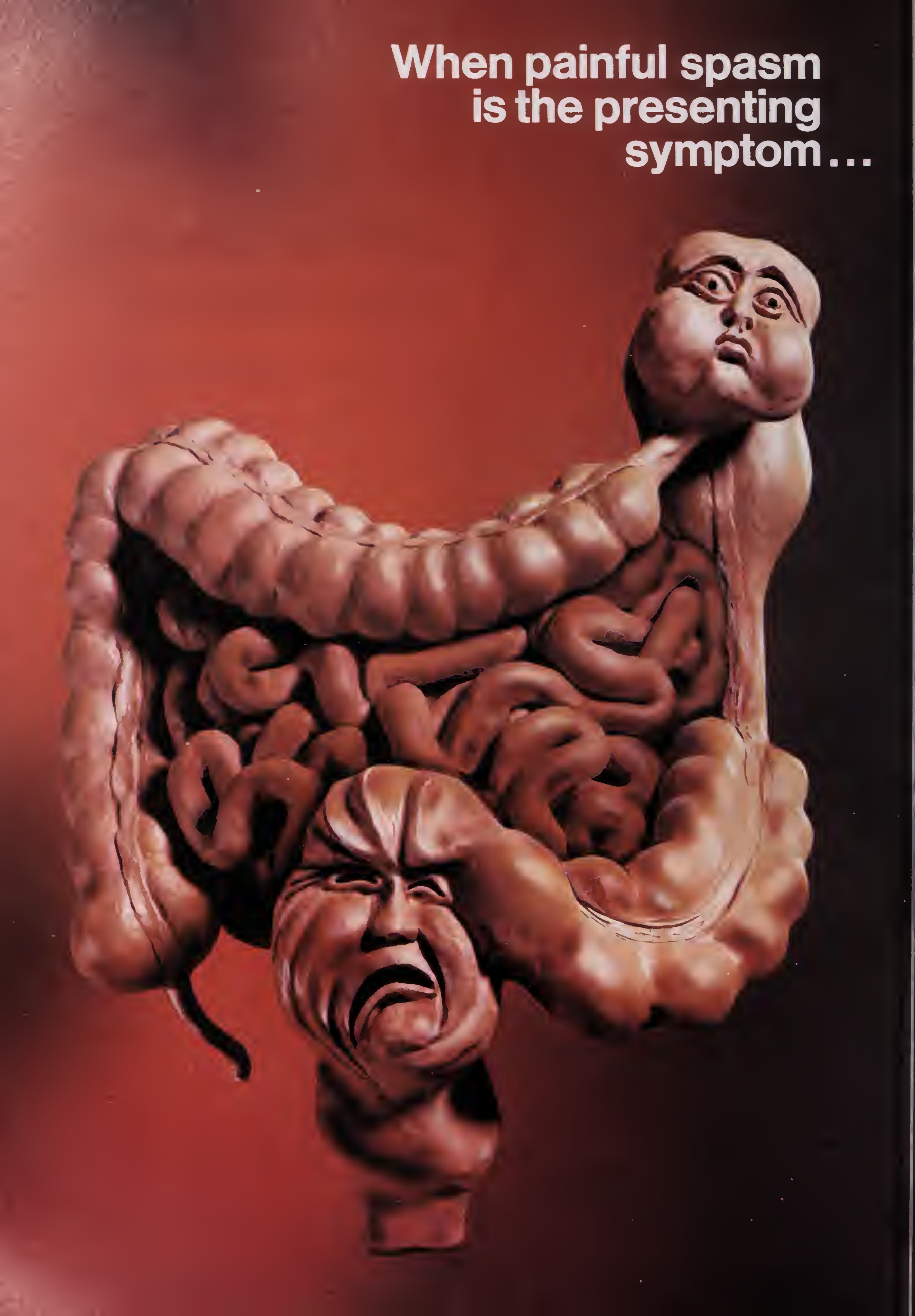
Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K+ frequently; both can cause K+ retention and elevated serum K+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules, Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
a SmithKline company
Carolina, P.R. 00630


When painful spasm is the presenting symptom...

in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

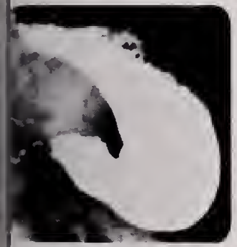
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

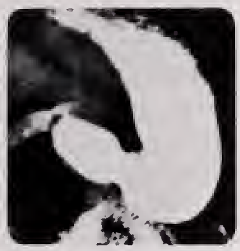
Demonstrated smooth muscle relaxant activity.

n this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

-4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations, mydriasis; cycloplegia; increased ocular tension; loss of taste, headache; nervousness; drowsiness; weakness; dizziness; insomnia, nausea; vomiting; impotence; suppression of lactation; constipation, bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg capsule and syrup. *Adults* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children.* 1 capsule or teaspoonful syrup three or four times daily. *Infants.* ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults* 1 tablet three or four times daily. Bentyl Injection: *Adults.* 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE. The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215 U S A

New Members

Rashid Ahmad, M.D., Tri-County Hospital, Mansfield 65704, has become a member of South Central County Medical Society. Dr. Ahmad is a native of India, received his preliminary education at Government College and his M.D. degree at King Edward Medical College in 1956. He specializes in internal medicine and cardiology.

Jill M. Baer, M.D., 3535 S. Jefferson, St. Louis 63118, has become a member of St. Louis Metropolitan Medical Society. Dr. Baer is a native of St. Louis, received her preliminary education at the University of Kentucky and her M.D. degree at the University of Kentucky in 1975. She specializes in pediatrics.

Michael F. L. Bartell, M.D., 1035 Bellevue Ave., St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Bartell is a native of Adelaide, Australia, received his preliminary education at California State University and his M.D. degree at Creighton University in 1973. He specializes in internal medicine.

John Bedwinek, M.D., 4511 Forest Park Blvd., St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Bedwinek is a native of Newport News, Va., received his preliminary education at Oberlin College and his M.D. degree at Columbia University in 1971. He specializes in therapeutic radiology.

Gregory L. Bono, M.D., St. Luke's Hospital, 44th and Wornall Rd., Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Bono is a native of Kansas City, received his preliminary education at Regis College and his M.D. degree at the University of Kansas in 1978. He specializes in obstetrics and gynecology.

Irene E. Bettinger, M.D., 432 Medical Plaza, 4320 Wornall Rd., Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Bettinger is a native of Montreal, Quebec, Canada, received her preliminary education at Reed College and her M.D. degree at the University of Pennsylvania in 1966. She specializes in psychiatry and neurology.

Alfred J. Bosche, M.D., 456 N. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Bosche is a native of St. Louis, received his preliminary ducation at Washington University and his M.D. egree at the University of Missouri in 1972. He pecializes in obstetrics and gynecology.

Kim Alan Carmichael, M.D., 5535 Delmar lvd., St. Louis 63112, has become a member of t. Louis Metropolitan Medical Society. Dr. armichael is a native of Roanoke, Va., received is preliminary education at Duke University and is M.D. degree at the Medical College of Virinia in 1978.

Sudarsan Chavala, M.D., 2601 N. Whittier, t. Louis 63113, has become a member of St. ouis Metropolitan Medical Society. Dr. Chavala a native of Thari Gonda, India, received his reliminary education at A.V.N. College and his l.D. degree at Andhra Medical College in 1969. le specializes in ophthalmology.

James M. Corry, M.D., 4989 Barnes Hospital, t. Louis 63110, has become a member of St. ouis Metropolitan Medical Society. Dr. Corry is native of St. Louis, received his preliminary ducation at Grinnell College and his M.D. deree at Washington University in 1974. He speializes in pediatric allergy.

Richard D. Cunningham, M.D., 609 Cherry, pringfield 65801, has become a member of reene County Medical Society. Dr. Cunningam is a native of Baltimore, Md., received his reliminary education at Tulane University and is M.D. degree at Tulane University in 1975. He pecializes in internal medicine.

Joseph V. Cusumano, M.D., 36 Lynnbrook d., St. Louis 63131, has become a member of t. Louis Metropolitan Medical Society. Dr. usumano is a native of St. Louis, received his reliminary education at the University of Missouri and his M.D. degree at St. Louis University n 1978. He specializes in psychiatry.

Joseph Drozda, M.D., 12255 DePaul Dr., ridgeton 63044, has become a member of St. ouis Metropolitan Medical Society. Dr. Drozda a native in Tucson, Ariz., received his prelimiary education at Creighton University and his l.D. degree at the University of Nebraska in 970. He specializes in cardiology and internal edicine.

Alexander J. Filip, M.D., 335 Penn Park, 2928 lain, Kansas City 64108, has become a member f Jackson County Medical Society. Dr. Filip is a ative of Omaha, Neb., received his preliminary education at Creighton University and his M.D. degree at Creighton University in 1941. He specializes in urology.

William H. Friedman, M.D., 6651 Chippewa, St. Louis 63109, has become a member of St. Louis Metropolitan Medical Society. Dr. Friedman is a native of Granite City, Ill., received his preliminary education at Washington University and his M.D. degree at Washington University in 1964. He specializes in otorhinolaryngology.

James Gerst, M.D., 11115 New Halls Ferry Rd., Florissant 63033, has become a member of St. Louis Metropolitan Medical Society. Dr. Gerst is a native of St. Louis, received his preliminary education at St. Benedict's College and his M.D. degree at the University of Missouri in 1972. He specializes in pediatrics.

John W. Hayes, M.D., P.O. Box 1118, 400 Carleton, Caruthersville 63830, has become a member of Pemiscot County Medical Society. Dr. Hayes is a native of Fayetteville, Tenn., received his preliminary education at Tennessee Technological University and his M.D. degree at the University of Tennessee in 1975. He specializes in internal medicine.

James Gilbert Hazel, Jr., M.D., Pemiscot County Medical Center, Hayti 63851, has become a member of Pemiscot County Medical Society. Dr. Hazel is a native of Baltimore, Md., received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1971. He specializes in radiology.

Pierre W. Keitges, M.D., 1010 Carondelet Dr., Kansas City 64114, has become a member of Jackson County Medical Society. Dr. Keitges is a native of Danbury, Iowa, received his preliminary education at Creighton University and his M.D. degree at Creighton University in 1957. He specializes in pathology.

Randall P. Kuntze, M.D., 501 Terrace Rd., Kennett 63857, has become a member of Dunklin County Medical Society. Dr. Kuntze is a native of Cape Girardeau, received his preliminary education at Southeast Missouri State University and his M.D. degree at the University of Missouri in 1977. He is in general practice.

Kathryn Macdonald, M.D., St. Mary's Health Center, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Macdonald is a native of Iowa City, Iowa, received her preliminary education at the University of Colorado and her M.D. degree at the University of Iowa in 1976. She specializes in emergency medicine.

James Marks, M.D., 4511 Forest Park, Room 311, St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Marks is a native of Galesburg, Ill., received his preliminary education at Knox College and his M.D. degree at Washington University in 1965. He specializes in therapeutic radiology.

Bruce L. McClennan, M.D., 510 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. McClennan is a native of Albany, N. Y., received his preliminary education at Union College and his M.D. degree at Upstate Medical School in 1967. He specializes in radiology.

G. Mikhail, M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Mikhail is a native of Atbara, Sudan, received his preliminary education at Alexandria University and his M.D. degree at Alexandria University in 1955. He specializes in obstetrics and gynecology.

Fred R. Monterubio, Jr., M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Monterubio is a native of St. Louis, received his preliminary education at Tulane University and his M.D. degree at the University of Monterrey in 1977. He specializes in obstetrics and gynecology.

Domingo Padilla, Jr., M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Padilla is a native of San Antonio, Tex. He received his M.D. degree at the University of Nuevo Leon in 1972. He specializes in obstetrics and gynecology.

Joseph M. Palazola, M.D., 440 Medical Plaza, 4320 Wornall Rd., Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Palazola is a native of Kansas City, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1972. He specializes in internal medicine.

Barry R. Paull, M.D., 550 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Paull is a native of San Francisco, Calif., received his preliminary education at the University of California and his M.D. degree at Washington University in 1974. He specializes in radiology and nuclear medicine.

Milienko V. Pilepich, M.D., 4511 Forest Park, St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Pilepich is a native of Yugoslavia, received his preliminary education at the University of Zagreb and his M.D. degree at the University of Zagreb in 1965. He specializes in radiology and radiation oncology.

Parveen Rashid, M.D., Tri-County Hospital, Mansfield 65704, has become a member of South Central County Medical Society. Dr. Rashid is a native of India, received her preliminary education at Government College for Women and her M.D. degree at King Edward Medical College in 1970. She specializes in obstetrics and gynecology.

Timothy J. Reichert, M.D., 500 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Reichert is a native of Dickinson, N. D. He received his M.D. degree at the University of Illinois in 1969. He specializes in pediatric otolaryngology.

William S. Ritter, M.D., St. Mary's Hospital, 101 Memorial Dr., Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Ritter is a native of Bethlehem, Pa., received his preliminary education at Lehigh University and his M.D. degree at Jefferson Medical College in 1971. He specializes in internal medicine and cardiovascular diseases.

Howard Schwartz, M.D., 601 S. Brentwood, St. Louis 63105, has become a member of St. Louis Metropolitan Medical Society. Dr. Schwartz is a native of New York, N. Y., received his preliminary education at Rensselaer Polytechnic Institute and his M.D. degree at New York University in 1966. He specializes in internal medicine.

Ponnuru Seshumurty, M.D., Children's Mercy Hospital, 24th and Gillham, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Seshumurty is a native of India, received his preliminary education at Hindu College and his M.D. degree at Andhra Medical College in 1962. He specializes in pediatrics.

John F. Shea, M.D., 1325 S. Grand, St. Louis 3104, has become a member of St. Louis Met-opolitan Medical Society. Dr. Shea is a native of eoria, Ill., received his preliminary education at radley University and his M.D. degree at St. ouis University in 1972. He specializes in eurosurgery.

Barry Siegfried, M.D., Barnes Hospital, Divi-on of Laboratory Medicine, St. Louis 63110, has ecome a member of St. Louis Metropolitan ledical Society. Dr. Siegfried is a native of St. ouis, received his preliminary education at Vashington University and his M.D. degree at Vashington University in 1972. He specializes in athology.

Joseph Simpson, M.D., 4511 Forest Park, St. ouis 63108, has become a member of St. Louis letropolitan Medical Society. Dr. Simpson is a ative of Cincinnati, Ohio, received his prelimi-ary education at Cornell University and his I.D. degree at Harvard University in 1973. He pecializes in therapeutic radiology.

Paul R. Singer, M.D., 660 South Euclid, St. ouis 63110, has become a member of St. Louis letropolitan Medical Society. Dr. Singer is a ative of Queens, N. Y., received his preliminary education at the University of Rochester and his M.D. degree at the University of Rochester in 1973. He specializes in ophthalmology.

Clark Sisk, M.D., 1442 S.W. Davenport, Portland, Ore. 97201, has become a member of St. Louis Metropolitan Medical Society. Dr. Sisk is a native of St. Louis, received his preliminary education at Stanford University and his M.D. degree at Washington University in 1977. He specializes in dermatology.

Charles G. Stanley, M.D., Richard Cabot Clinic, 1810 Summit, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Stanley is a native of Kansas City, received his preliminary education at Rockhurst College and his M.D. degree at Creighton University in 1953. He specializes in occupational medicine.

Thomas J. Vitale, M.D., 6226 Loran, St. Louis 63109, has become a member of St. Louis Metropolitan Medical Society. Dr. Vitale is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1978. He specializes in general surgery.

(Continued on next page)

SERVING YOU IN MISSOURI

MUNNS
MEDICAL
SUPPLY

9202 Barton
Overland Park, Ks 66214
913-492-5820

635 Hanley Ind. Ct.
St. Louis, Mo. 63144
314-645-0300

Robert C. Wanless, M.D., 1035 Bellevue Ave., St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Wanless is a native of Springfield, Ill., received his preliminary education at Northwestern University and his M.D. degree at St. Louis University in 1971. He specializes in plastic surgery.

Edward B. Weisman, M.D., P. O. Box 983, Kansas City 64141, has become a member of Jackson County Medical Society. Dr. Weisman is a native of New York, N. Y., received his preliminary education at the University of Pennsylvani and his M.D. degree at Hannemann Medica College in 1947. He specializes in psychiatry.

James R. Williams, M.D., 500 Porter, Auror 65605, has become a member of Ozarks Count Medical Society. Dr. Williams is a native of Kansas City, received his preliminary education a William Jewell College and his M.D. at the University of Missouri in 1974. He specializes i radiology.

John Wood Williams, IV, M.D., 404 E. Battlefield, Springfield 65807, has become a membe of Greene County Medical Society. Dr. William is a native of Springfield, received his preliminar education at Southern Methodist University an his M.D. degree at the University of Missouri i 1974. He specializes in obstetrics and gynecology

George H. Woy, M.D., Suite 700, Westown VII, Liberty 64068, has become a member of Cla County Medical Society. Dr. Woy is a native o Berlin, Germany, received his preliminary education at the University of Kansas and his M.D degree at the University of Kansas in 1972. H specializes in orthopedics.

The advertising in
MISSOURI MEDICINE
keeps you informed
and helps pay the
publishing costs!
When the local
representative calls,
tell him you saw
his company's ad in
your journal.

★
Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Bargmann and Philip E. Mappert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
6908 W. 101st Terrace, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

THE AMA BOARD of Trustees approved major expansion of continuing medical education programming at its meeting at Headquarters on February 13-15. The AMA Council on Continuing Physician Education and staff of the Division of Continuing Medical Studies will work with an outside consultant to produce programs for physician instruction. Production will begin with four new videoclinic programs and build up to about 40 programs by early 1982, at which time production will be maintained at around 18 new programs each year. The Board authorized an expenditure of $500,000 in fiscal 1979, with the intention of spending an additional $2.5 million over the next four years. In 1983, income from the project is expected to exceed expenditures, although recovery of the original outlays is not anticipated until 1987.

THE COUNCIL on Medical Service will review AMA policy on physician reimbursement, giving special attention to the concept of usual and customary or reasonable fees versus negotiated fee schedules. The council's recommendation for the study was approved by the Board of Trustees due to reports that the Administration's NHI proposal may call for fee schedules, reports that HEW staff is discussing reimbursement alternatives and the possibility of proposed regulations on the subject in the near future.

FINDINGS FROM two continuing surveys conducted for the AMA by the Gallup Organization and Market Opinion Research were released at the 7th AMA National Leadership Conference held in Chicago on February 15-18. Among the results shown by the surveys are that 47% of AMA members and 59% of nonmembers feel there is a need for national health insurance; that a majority of the nation's physicians, including those who feel strongly about the need for NHI, believe the quality of medical care will worsen if NHI is enacted; and that 43% of the public support NHI even if it means an increase in taxes, which indicates that the issue is withstanding the country's "Proposition 13 mood."

THE AMA URGES medical societies to become familiar with the "Health Action" kits recently published by the U. S. Chamber of Commerce. The kits contain strategies to improve health care and contain costs from a business perspective. The Association also encourages involvement with local Chambers of Commerce on a voluntary cost-containment program. Copies of the kits are available from the U. S. Chamber of Commerce, 1615 H St., N.W., Washington, D. C. 20062. The kits sell for $15 each for 1-9 copies; $13.50 each for 10-24 copies; and $12 each for 25 copies or more. For further information contact Charles Macenski, Office of EVP, AMA Headquarters.

A RULE PROPOSING ACCESS to employees' medical records should be substantially revised to protect employees' rights of privacy, the AMA testified at a hearing before the Occupational Safety and Health Administration. The proposed regulation would enable OSHA to inspect and copy records held by employers. "Neither law nor necessity confers on OSHA an unlimited right to intrude on the traditional privacy of the patient-physician relationship without the patient's consent," the AMA said. The AMA witness also pointed out that the proposal would give access to the medical files of many private physicians who practice occupational medicine.

"ALTERNATIVE HEALTH CARE Delivery Systems: The HMO Concept" is the title of a new AMA publication designed to enhance membership knowledge of health maintenance organizations. Featured in the brochure is information on the history, legislative status, modes of delivery, cost effectiveness and quality of care of HMOs. Also discussed are the options of federal qualification vs. state certification. Single copies of the brochure (MP 12) are free of charge. Bulk orders sell for 30¢ each for 2-10 copies and 20¢ each for 11 or more. For single copies contact the Department of Professional Review, AMA Headquarters. For bulk orders write AMA, P.O. Box 821, Monroe, Wis. 53566.

Federal Agencies Called Threat to Science Journals

The future of scientific journals is being seriously threatened by the federal government in the United States, the *Journal of the American Medical Association* charged recently.

The attack on the journals, which is the most important means of communication of new research knowledge among scientists, has been launched by the Internal Revenue Service, the Interstate Commerce Commission and the U. S. Post Office, says *JAMA* Editor William R. Barclay, M.D.

The IRS already has told the publishers of 90% of the chemistry and physics journals in the United States that it plans to revoke their tax-exempt status and has notified the American Chemical Society and the American Institute of Physics that they are no longer to be treated as tax-exempt organizations, says Dr. Barclay. The IRS also has brought action against the American Medical Association.

The Interstate Commerce Commission is studying AMA publications "with the obvious intent of penalizing the AMA in its legitimate and valuable role of disseminating scientific information." The postal service is proposing a new rate structure that will be prohibitively expensive for many scientific societies and may result in sharp curtailment of their publications, he charges.

In addition to the government's "destructive activities," journals are also facing uncontrolled inflation in the costs of paper and printing.

If the government persists in its attack on the journals, it actually will realize very little, if any, money from the taxes and extra postal charges as many of the journals will die off and will be curtailed, Dr. Barclay says.

"Respect for scientific achievement appears to be waning in this country, and there are signs of antielitism in government agencies, indifference to science in the executive branch of government, and hostility among some members of Congress."

HANLEY 14 x 17 Vertical X-Ray and Medical Record Cabinets are used in most hospitals in America.

Special new ultrasonic, $399. Physio Therapy—Complete Examining and Reception Room Furniture—Traction Equipment—Hospital Beds—Wheelchairs—Jacuzzi Whirlpools—Oxygen. SOLD & RENTED.

HANLEY MEDICAL EQUIPMENT
5614 S. Grand St. Louis, Mo. 63111 314-351-3359

Tenuate® CIV
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity. or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence*. Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy*: Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children*: Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular*: Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System*: Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal*: Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic*: Urticaria, rash, ecchymosis, erythema. *Endocrine*: Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System*: Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous*: A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily. swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDDSAGE: Manifestations of acute overdosage include restlessness. tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633
Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request — Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence. Italy, Jan. 20-21, 1977.

Merrell

8-3921 (Y587A)

Whether overweight is a complicating factor... or just uncomplicated overweight.

Tenuate® Dospan® ⒸIV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice[1] And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate–it makes sense. And it's responsible medicine.

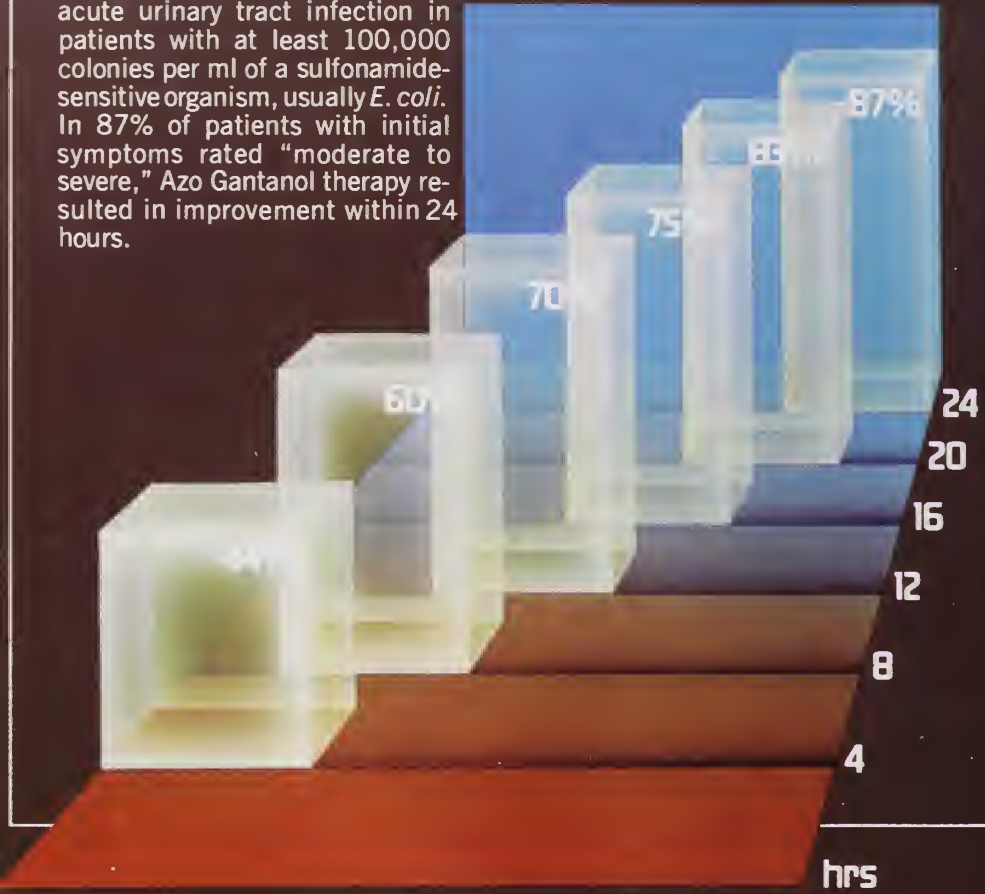
Merrell

For prescribing information see opposite page.

Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for
the pain

for
the pathogens

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

Before prescribing, please consult complet
uct information, a summary of which follo
Indications: In adults, urinary tract infecti
complicated by pain (primarily pyelonephri
pyelitis and cystitis) due to susceptible
(usually *E. coli, Klebsiella-Aerobacter, Sta*
coccus aureus, Preteus mirabilis, and, les
quently, *Proteus vulgaris*) in the absence
obstructive uropathy or foreign bodies. **No**
fully coordinate *in vitro* **sulfonamide sensit**
tests with bacteriologic and clinical respo
aminobenzoic acid to follow-up culture
increasing frequency of resistant organism
the usefulness of antibacterials including
fonamides. Measure sulfonamide blood
variations may occur; 20 mg/100 ml shoul
maximum total level.
Contraindications: Children below age 12;
fonamide hypersensitivity; pregnancy at
during nursing period; because Azo Ganta
tains phenazopyridine hydrochloride it is
dicated in glomerulonephritis, severe hepa
uremia, and pyelonephritis of pregnancy w
disturbances.
Warnings: Safety during pregnancy not esta
Deaths from hypersensitivity reactions,
tosis, aplastic anemia and other blood dy
have been reported and early clinical signs
throat, fever, pallor, purpura or jaundice)
dicate serious blood disorders. Frequent
urinalysis with microscopic examination
ommended during sulfonamide therapy.
Precautions: Use cautiously in patients wit
paired renal or hepatic function, severe all
bronchial asthma; in glucose-6-phosphate
dehydrogenase-deficient individuals in
dose-related hemolysis may occur. Maintai
adequate fluid intake to prevent crystallu
stone formation.
Adverse Reactions: *Blood dyscrasias* (agra
ulocytosis, aplastic anemia, thrombocyt
leukopenia, hemolytic anemia, purpura, hy
thrombinemia and methemoglobinemia); a
reactions (erythema multiforme, skin erupt
Stevens-Johnson syndrome, epidermal ne
urticaria, serum sickness, pruritus, exfolia
dermatitis, anaphylactoid reactions, peri
edema, conjunctival and scleral injection,
sensitization, arthralgia and allergic myoca
G.I. reactions (nausea, emesis, abdominal
hepatitis, diarrhea, anorexia, pancreatitis a
stomatitis); *CNS reactions* (headache, peri
neuritis, mental depression, convulsions, a
hallucinations, tinnitus, vertigo and in
miscellaneous reactions (drug fever, chills,
nephrosis with oliguria and anuria, periarte
nodosa and L. E. phenomenon). Due to
chemical similarities with some goitrogens,
uretics (acetazolamide, thiazides) and oral
glycemic agents, sulfonamides have cau
instances of goiter production, diuresis and
glycemia. Cross-sensitivity with these agen
exist.
Dosage: Azo Gantanol is intended for the
painful phase of urinary tract infections. *U*
adult dosage: 2 Gm (4 tabs) initially, then
(2 tabs) B.I.D. for up to 3 days. If pain pe
causes other than infection should be soug
After relief of pain has been obtained, cont
treatment with Gantanol (sulfamethoxazole
be considered.
NOTE: Patients should be told that the ora
dye (phenazopyridine HCl) will color the u
Supplied: Tablets, red, film-coated, each
ing 0.5 Gm sulfamethoxazole and 100 mg
phenazopyridine HCl—bottles of 100 and

ROCHE

Roche Laboratories
Division of Hoffmann-La R
Nutley, New Jersey 07110

INDEX TO ADVERTISERS

They Help Make MISSOURI MEDICINE *Possible*

eltone Electronics 219
urroughs Wellcome 194
oetz-Niemer Co. 228
anley Medical Equipment Co. 236
red S. James & Co. of Missouri, Inc. 222
li Lilly & Company 187
ead Johnson Pharmaceutical Division . Insert (204-205)
edical Defense Associates 218
edical Protective Company 234
Merck Sharp & Dohme .... Insert (220-221)
Merrell-National Laboratories
Insert (228-229), 229, 230, 236, Insert (236-237)
MOMEDICO 186
Munns Medical Supply 233
Purepac 189
Roche Laboratories .... 188, Insert (188-189),
...... 220, Insert (220-221), Insert (236-237), 239, 240
Smith, Kline & French .... Insert (228-229)
The Upjohn Company .... Insert (220-221)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

AMILY PRACTICE OR GENERAL PRACTICE — Phy-
cians are needed at new, fully equipped hospital in South-
astern Missouri. Incentives include free office. Please write
e Director, Professional Recruitment, Brookwood Health
ervices, Inc., 2000-D Brookwood Medical Center Drive,
irmingham, AL 35209 or call (205) 877-1896. (Agents please
rite.)

OR SALE — Physician's 430-acre estate, Cuba, Mo. Will
ivide. Will finance. One-of-a-kind rustic 4-bedroom home,
-bedroom caretaker's cabin, lighted tennis court, heated
ool, private airstrip, all native game, fish to 20 lb, 90%
mbered, ¾ mile to championship golf course, 80 miles to
t. Louis via I44. Many extras. Packaged for maximum per-
nal privacy, pleasure, comfort and convenience. Shown by
ppointment only. Phone (314) 885-2311.

PHYSICIANS WANTED FOR ST. CHARLES COUNTY — Hybrid primary care emergency medicine opportunity in new health care facility. Walk-up, after-hours clinic and first aid facility in western St. Charles County as alternative to Emergency Department utilization. Evening and weekend. May alternate with Emergency Department position at St. Joseph Hospital. Excellent compensation. Contact Gerald J. Duling, M.D., Medical Director, St. Joseph Hospital, St. Charles, Mo. 63301. (314) 946-6811.

FULL-TIME EMERGENCY MEDICINE OPPORTUNITY — Jefferson City, Mo. at St. Mary's/Memorial Hospitals. Congenial atmosphere. Work two days per week and earn $44,000+ annually, $5,000,000 malpractice coverage. Send CV to Cecil Oakes, M.D., Emergency Department, 610 West Elm, Jefferson City, MO 65101 or call collect 314-878-2280.

FAMILY PRACTICE — Solo Board Certified family practitioner is seeking a family practice associate in growing community 6 miles north of Kansas City International Airport. Contact, Carl M. Myers, M.D., Platte Medical Clinic, Platte City, Mo. 64079. (816) 431-2200.

WANTED — Used surgical, medical equipment in good condition or hospital surplus. Private party. Write: 12128 Hibler Dr., Creve Coeur, Mo. 63141.

WANTED — Used (1) x-ray and Fluro at least 500 m.a.p., (2) hydrolic operating table, (3) anesthesia machine. Equipment should be in good working condition. Private party. Write: 12128 Hibler Dr., Creve Coeur, Mo. 63141.

For MSMA Impaired Physician Program Assistance,

Call 314-636-5744

24-Hour Telephone Answering Service. Calls Are Confidential.

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

"*Early Medieval Medicine With Special Reference to France and Charters*" by Loren C. MacKinney, Professor of Medieval History, University of North Carolina *(Vol. III of the Third Series of the Publications of the Institute of the History of Medicine. The Johns Hopkins University.)*

The author of the above points out that the term, "Dark Ages" which was applied to the fifth and 11th centuries, is a misnomer both as it regards medicine and as it regards civilization in general.

Although intellectual life was slowed, there were fewer educated men and the intellectual leaders were not so brilliant.

In the first part of this period, the physicians were laymen. The churchmen were opposed to what was called "human healing" and, in their writings, stressed "supernatural medicine" which encompassed healing by Christian saints and their relics, Christian pagan charms and magical incantations. Later in this period, most of the physicians were monks and members of the secular clergy. Then, the churchmen began progressively to lay more stress on the human efforts at healing and less on divine intervention.

In medieval times, it was considered a function of the church to provide medical care along with its duties of spiritual guidance, provision for the poor and the traveler, and education. The cathedrals were mainly held responsible for the medical care, but this seems to have been rather haphazard and incidental to the other church activities.

In medieval France, there was nothing to correspond to the modern hospital. According to the Benedictine rule, each monastery was supposed to contain an isolated section for the sick which was presided over by one of the monks, but there was little provision for the sick who were not members of the monasteries.

In the later middle ages, a smattering of medicine was a part of every educated man's training. Those who wished to know more would study under some physician. There were no medical schools in medieval France. The outstanding medical centers were the cathedral schools rather than the monasteries.

TWENTY-FIVE YEARS AGO

A dedication ceremony was held for the proposed $2 million, 156-bed wing for the care of the mentally and chronically ill at Deaconess Hospital in St. Louis. Also, the cornerstone for the $1,430,000 Renard Hospital in the Washington University Medical Center has been laid. The building also will provide teaching and research facilities in the field of psychiatry.

Construction has started on the 48-bed addition to the Boone County Hospital. Local citizens contributed $120,949.05 to augment a $100,000 gif from Dr. and Mrs. Frank G. Nifong.

TEN YEARS AGO

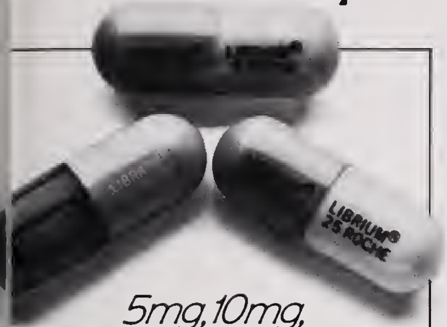
The Cochran-Hemodialysis Center is the only long-term dialysis facility in the St. Louis metropolitan area. It is staffed and operated by the St Louis University School of Medicine as a join project with the Veterans Administration. Recently, it was expanded and remodeled.

Signing of the contract for a $3 million addition to the Edward Mallinckrodt Institute of Radiology has been announced by Juan M. Taveras, M.D. institute director and head of the Department o Radiology at Washington University School o Medicine.

Doyle C. McCraw, M.D., Bolivar, will succeed David N. Kerr, M.D., St. Louis, as president o the Missouri State Medical Association during the 111th Annual Session on March 20-23 at the Chase-Park Plaza Hotel in St. Louis.

Librium®

chlordiazepoxide HCl/Roche



5mg, 10mg, 25mg capsules

- ☐ Proven antianxiety performance
- ☐ An unsurpassed safety record
- ☐ Predictable patient response
- ☐ Minimal effect on mental acuity at recommended doses
- ☐ Minimal interference with many primary medications, such as antacids, anticholinergics, diuretics, cardiac glycosides and antihypertensive agents

efore prescribing, please consult complete product infor- ation, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone accompanying various disease states. Efficacy beyond ur months not established by systematic clinical studies. eriodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity the drug.

Warnings: Warn patients that mental and/or physical abil- ies required for tasks such as driving or operating ma- hinery may be impaired, as may be mental alertness in chil- ren, and that concomitant use with alcohol or CNS depres- ants may have an additive effect. Though physical and psy- hological dependence have rarely been reported on recom- ended doses, use caution in administering to addiction- rone individuals or those who might increase dosage; with- rawal symptoms (including convulsions), following discon- nuation of the drug and similar to those seen with barbi- urates, have been reported.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: In the elderly and debilitated, and in chil- ren over six, limit to smallest effective dosage (initially 10 g or less per day) to preclude ataxia or oversedation, in- reasing gradually as needed and tolerated. Not recom- ended in children under six. Though generally not recom- ended, if combination therapy with other psycho- opics seems indicated, carefully consider individual phar- acologic effects, particularly in use of potentiating drugs uch as MAO inhibitors and phenothiazines. Observe usual recautions in presence of impaired renal or hepatic func- on. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. Oral—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

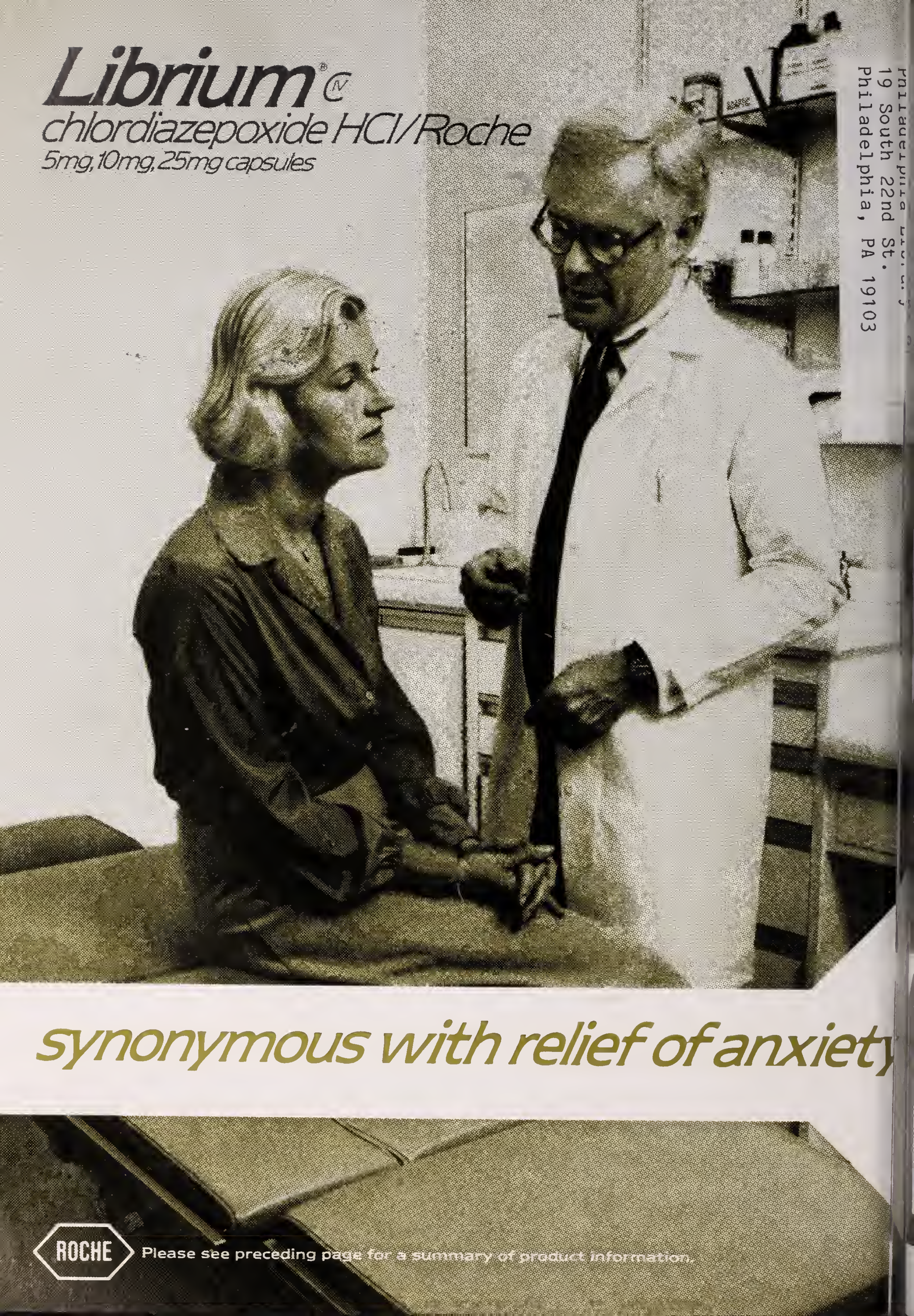
Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

synonymous with relief of anxiety

ROCHE

Roche Products Inc.
Manati, Puerto Rico 00701

Please see following page.



Librium® Ⓒ
chlordiazepoxide HCl/Roche
5mg, 10mg, 25mg capsules

synonymous with relief of anxiety

ROCHE

Please see preceding page for a summary of product information.

Philadelphia
19 South 22nd St.
Philadelphia, PA 19103

Missouri Medicine

Vol. 76, No. 5 (ISSN 0026-6620) May, 1979

MDS

Special!

The Art of Healing

By Philip Tumulty, M.D.
Baltimore, Md.

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
JUN 1 - 1979

Rational Use of Insulin

The 'No Code Blue' Issue: Missouri Is Not Massachusetts

University of Missouri-Columbia Medical Center

SPECIAL ISSUE

Obsolete or Ineffective Procedures

Update: Irritable Bowel Syndrome

MISSOURI STATE MEDICAL ASSOCIATION

Contents • Page 245

There's more to malpractice insurance than just being covered.

Momedico® has a better way.

Your present professional liability insurance probably covers you for everything you can think of. But think of what more your insurance company should do for you. Special needs you may have, lower premiums on your policy, service and assistance as well as coverage. And a voice in setting company policies and direction. That's why Momedico has a better way.

Doctors in the insurance business.

Today, more than 80,000 physicians in the United States carry professional liability protection through their own insurance companies. There are 19 such companies sponsored by state or local medical societies. More than 40 doctor-owned companies and trusts are either operational or on the drawing boards.

Formed by Missouri doctors, for Missouri doctors.

Here at home, physicians found adequate insurance protection lacking. And so, Momedico was formed by the Missouri State Medical Association. This stock insurance company is licensed and regulated the same as all other stock insurance companies in Missouri. In unity there is strength, and nowhere can you find more strength in your protection than in this doctor-directed company. All are fellow physicians.

Lower premiums. More flexible coverage.

Everyone promises low premiums. Momedico delivers on that promise because our operating expenses are lower than commercial insurers. We don't have to pay stockholders who are interested in profit, not protection. We can design a policy to meet your needs, your practice. Our unique status directly benefits you. If the premiums we collect are more than is needed, they can be returned to you through a participating provision. One more benefit: you pay no deductible.

And still your money earns.

All insurance companies must establish substantial reserves. Momedico is no exception. It's what we do with the earnings on this money that makes Momedico a better way. The invested earnings accrue to your benefit, and every other doctor who is a member of the company. Commercial insurance companies retain these earnings for their benefit. Not Momedico.

The best defense is a good lawyer.

Nobody wants to end up in court. If you do, you'll be glad Momedico is behind you. We'll do everything proper and possible to protect your interests. We have retained the top-rated claims attorneys who work for some of the country's largest insurance companies. We'll also help provide the best expert witness assistance. By joining Momedico, you can help keep closer control of claims settlements. And you don't pay hidden legal fees.

Strong and growing.

All of our policy contracts are backed by prominent American insurance companies that specialize in medical underwriting. The company is financially healthy, and structured to maintain that health along with growth. In the short time since Momedico was created by the Missouri State Medical Association, over six hundred physicians have become policyholders. And more join every day.

John N. Martin, M.D.
President, Missouri State Medical Assoc.

"As a fellow physician, and a policyholder of Momedico, I enthusiastically endorse this professional liability program. It has been designed by doctors, for doctors. I invite you to learn more about this protection from Momedico."

Mail this coupon today. Find out why Momedico and the Missouri State Medical Assoc. have a better way to protect you.

Yes, I would like to know more about professional liability insurance with Momedico.

MOMEDICO®
Better Protection. Together.
Sponsored by the Missouri State Medical Association

☐ Have your agent call me. ☐ Send me more information, please.

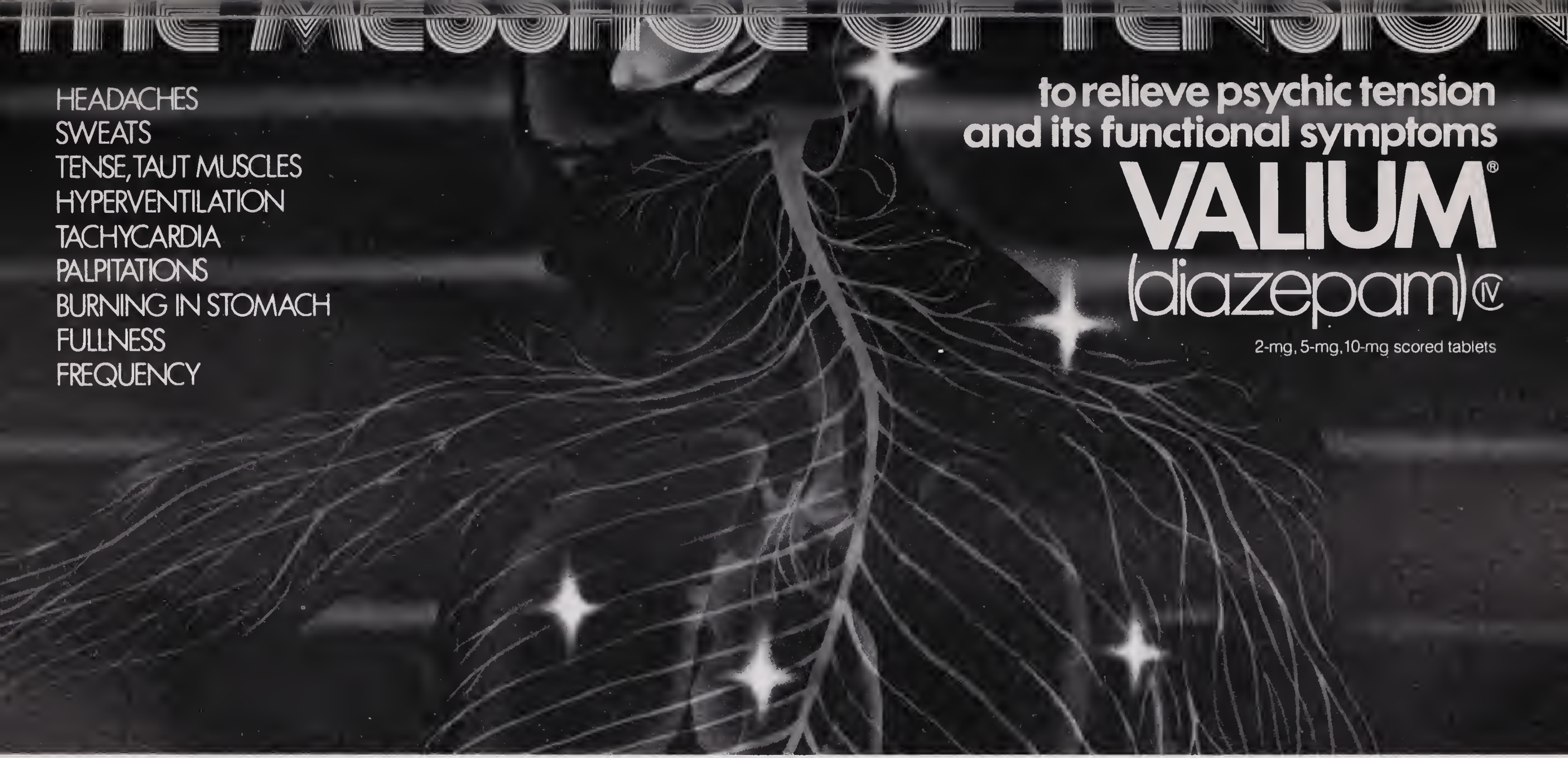
NAME ______________________________

ADDRESS ______________________________

CITY/RFD ______________________________

ZIP ______________ PHONE # ______________

Mail to:
Momedico, 100 North Broadway, St. Louis, MO 63102 or call (314) 241-4774



HEADACHES
SWEATS
TENSE, TAUT MUSCLES
HYPERVENTILATION
TACHYCARDIA
PALPITATIONS
BURNING IN STOMACH
FULLNESS
FREQUENCY

to relieve psychic tension and its functional symptoms

VALIUM®
(diazepam) Ⓘⓥ

2-mg, 5-mg, 10-mg scored tablets

VALIUM®(diazepam)

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Donald Judd, M.D., St. Louis, *Alternate*
Rae W. Froelich, M.D., Lebanon
George Bohigan, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
Richard H. Fallon, M.D., St. Louis
James M. Stokes, M.D., St. Louis
J. Otto Lottes, M.D., St. Louis
Theodore L. Paletta, M.D., St. Louis
Frederick D. Peterson, M.D., St. Louis
Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
Vice-Councilor, Paul H. Rother, M.D., St. Charles
5th District, H. Peter Ekern, M.D., Mexico
Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
Donald McIntosh, M.D., Kansas City
Ronald A. Youmans, M.D., Kansas City
Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
Marvin A. Singleton, M.D., Joplin
Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, Wilfred E. Wooldridge, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

Contents for May, 1979

Scientific Articles

The 'No Code Blue' Issue: Missouri Is Not Massachusetts; Lawrence M. Lampton, M.D. and Daniel H. Winship, M.D. .. 259

Update: Irritable Bowel Syndrome; J. Ned Smith, M.D. 262

Radiographic Manifestations of Pulmonary Aspergillosis, *A Review of Four Cases;* James D. Maltby, M.D. 265

Rational Use of Insulin; David M. Klachko, M.D. 270

Heparin Induced Thrombocytopenia, *A Life and Limb Threatening Complication of Heparin Therapy;* Donald N. Kapsch, M.D. and Donald Silver, M.D. 274

Special Article

The Art of Healing; Philip A. Tumulty, M.D., *Baltimore, Md.* 250

News and Features

In Brief 246, 256
MSMA News Round-Up ..... Insert (246-247)
Photo-Comment by James W. Clawson, M.D. 248
Editor's Corner 249
In Memoriam 278
President's Message 281
MSMA Auxiliary 283
Obsolete and Ineffective Procedures 286
Continuing Education Coming Events ... 289
News From the Medical Schools 290
County Society News 293
New Members 294
Index to Advertisers 297
In Review 298

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D.
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
William M. Hart, M.D., Columbia
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

in Brief

A summary of AMA, medical & health news

THE VOLUNTARY EFFORT was successful in its 1978 goal of reducing the rate of increase in hospital expenditures, the Congressional Budget Office (CBO) told the House Committee on the Budget. However, the CBO said that the VE's goal of a two percentage point reduction in 1979 probably won't be achieved. The CBO added, "The projected general inflation rate of 8.4% during 1979 and other cost-increasing factors will make the rate of increase in hospital costs too high for the VE to reach its goal." The VE was initiated in December 1977 by the American Hospital Association, the Federation of American Hospitals and the AMA.

THE INTRODUCTION IN STATE legislatures of a model bill that would allow a coroner's physician or medical examiner to remove the pituitary gland at the time of autopsy is urged by the AMA. The bill was developed following AMA House of Delegates action at the 1978 Interim Meeting to encourage increased collection of the human growth hormone. The model bill would apply only in cases where autopsies are required by law, unless the decedent or relatives have indicated disapproval. The hormone, supplied free to physicians, is in very limited supply, according to the National Pituitary Agency.

MANY STATE MEDICAL associations have expressed interest in scheduling AMA Official Family Briefings during their 1979 annual meetings. The briefings began this year as an extension of the Board of Trustees Visitation Program, which has been conducted for many years and under which AMA officers and trustees visit the annual meetings upon invitation from the state associations. The purpose of the Official Family Briefings is to promote a private, informal exchange of information on significant health care issues between AMA officials and state association leadership. For more information contact the Office of EVP, AMA Headquarters.

Tenuate® Ⓒ
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary
INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.
CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).
WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence*. Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy*: Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children*: Tenuate is not recommended for use in children under 12 years of age.
PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.
ADVERSE REACTIONS: *Cardiovascular*: Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System*: Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal*: Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic*: Urticaria, rash, ecchymosis, erythema. *Endocrine*: Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System*: Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous*: A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.
DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.
OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633
Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request – Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

8-3921 (Y587A)

Whether overweight is a complicating factor... or just uncomplicated overweight.

Tenuate® Dospan® ⓘⓥ

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice[1] And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

Merrell

For prescribing information see opposite page.

new
600 mg tablets
Motrin®
ibuprofen, Upjohn

Upjohn
Motrin

More convenient for
some of your patients.

Now there are three
Motrin tablet strengths
to choose from–
600 mg, 400 mg, and 300 mg

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001, U.S.A.

© 1979 The Upjohn Company J-6999-4 April 1979

In Edema* or Hypertension* when potassium balance is a concern...

Potassium-Sparing

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Makes Sense

In Edema

The triamterene in 'Dyazide' limits potassium loss and provides an additive diuretic effect to that of the hydrochlorothiazide component.

In Hypertension

As the hydrochlorothiazide in 'Dyazide' lowers blood pressure, the triamterene component limits potassium loss.

Serum K^+ and BUN should be checked periodically particularly in the elderly, diabetics, and those with suspected or confirmed renal insufficiency (see Warnings). If hyperkalemia develops, substitute a thiazide alone.

Before prescribing, see complete prescribing information in SK&F Co. literature or *PDR*. A brief summary follows:

* **WARNING**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
a SmithKline company

SK&F CO.
Carolina, P.R. 00630

EMPIRIN® COMPOUND c̄ CODEINE

Each tablet contains: aspirin, 227 mg; phenacetin, 162 mg; and caffeine, 32 mg; plus codeine phosphate in one of the following strengths: #4—60 mg (gr 1); #3—30 mg (gr ½); #2—15 mg (gr ¼); and #1—7.5 mg (gr ⅛). (Warning—may be habit-forming). CIII

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

MSMA

NEWS ROUND - UP

May, 1979

MSMA House adopts new policies

The House of Delegates at the 1979 Annual Session, April 19-22, in St. Louis, considered several resolutions calling for changes in the MSMA Constitution and Bylaws.

The delegates accepted a resolution to create special student component societies at each of the medical schools in Missouri and to have that student section represented by eight delegates to the House of Delegates. The resolution states that the student section be represented by a student Councilor on the MSMA Council. In accordance with the MSMA Constitution, this resolution will lay on the table until the 1979 Interim Session when final action will be taken.

Another resolution changes Chapter IV, Sections 1 and 2 of the MSMA Bylaws to allow one or more names to be proposed by the Nominating Committee as candidates for MSMA offices. In addition, all elections shall be by written ballot.

In all, the House adopted or referred 23 resolutions dealing with legislation, governmental relations, internal affairs and MSMA policies. Brief explanations of these resolutions follow.

INTERNAL AFFAIRS

- Reapportionment of the MSMA House of Delegates — Referred to the Council.
- MSMA House Representation — Present formula for representation to House is to remain as is until a time when it can be properly re-evaluated.
- Council District Change — Jefferson County Medical Society becomes a part of the Tenth Councilor District.
- New MSMA Committee — Establishes a "Quality of Life Committee."
- Medical Hall of Fame — Referred to Council a resolution endorsing the concept of an All American Hall of Fame in St. Louis.

LEGISLATION, GOVERNMENTAL RELATIONS

- Professional Liability Review Board — Instructs the Council to establish the feasibility of a system of voluntary Professional Liability Review Boards until a new state statute is adopted and to report back to the House at the 1979 Interim Session. It also resolves to draw up a bill for the 1980 Missouri General Assembly which would re-establish a review board which could withstand constitutional challenges.
- Physician's Assistants — Opposes state licensure or certification of additional health care personnel.
- Physical Fitness and Health Council — Requests the Governor to establish a Missouri Council on Physical Fitness and Health.
- School Health Curriculum — Resolves to propose to the 81st Missouri General Assembly the AMA model legislation "To Provide for the Establishment of a Comprehensive Health Education Program in the Elementary and Secondary Schools."

Outgoing MSMA President, Dr. John N. Martin, (left) presents the gavel to 1979-80 President, Dr. Andrew McCanse.

- Good Samaritan Bill — Urges the Missouri Senate to pass this long overdue bill.
- Family Services Claim Form — Resolves to inform the Division of Family Services that the new billing form is unacceptable because of the excessive amount of information demanded.
- Balanced Budget — Urges the Missouri General Assembly to demand fiscal responsibility at the federal level by calling for a limited constitutional convention.
- Physicians/Armed Services — Recommends through MSMA Delegates to the AMA that the Department of Defense take further steps to attract physicians to serve in the Armed Forces Reserve.
- Practice of Medicine/Unlicensed Persons — Resolves to appraise the Board of Healing Arts that only physicians can practice medicine and requests prosecution for violation of the medical practice act.
- Paramedical Personnel Accreditation — Referred to the Council a resolution calling for organized accreditation or licensure of paramedical groups, recognizing the need for control of these many new disciplines.

MSMA POLICIES

- Medical Witnesses — This substitute resolution calls for expulsion of a member who testifies as a medical witness outside of his specialty.

Continued on Page 3

Dr. McCanse installed as MSMA President; Dr. Bradley voted President-Elect

Dr. Andrew McCanse, Kansas City, was installed as President of the Missouri State Medical Association during the Past Presidents' Banquet at the 121st Annual Session, April 21, in St. Louis.

Dr. McCanse, who has served as President-Elect during the past year, succeeds Dr. John N. Martin, of St. Joseph.

Dr. Richard V. Bradley was unanimously elected as President-Elect of the MSMA and will assume his position as President during the 1980 Annual Session.

Dr. Bradley, St. Louis, is Immediate Past Chairman of the MSMA Council, has been Treasurer of the MSMA and has served several terms as Councilor from the Third District.

In other elections, Delegates to the House selected three Vice Presidents, a Speaker and Vice Speaker, three Delegates to the AMA and three Alternate Delegates to the AMA. The new officers are:

Vice Presidents
Dr. Milton B. Ozar, Kansas City
Dr. Mary J. Merideth, Cassville
Dr. C. G. Stauffacher, Sedalia

Speaker
Dr. Edwin K. Buford, Cape Girardeau

Vice Speaker
Dr. Jay L. Meyer, St. Louis

AMA Delegates
Dr. Melvin C. Kasten, Cape Girardeau
Dr. Robert A. Slickman, Kansas City
Dr. Francis X. Lieb, St. Louis

AMA Alternate Delegates
Dr. Hugh Stephenson, Jr., Columbia
Dr. Vernon Balster, St. Louis
Dr. George Bohigian, St. Louis

Councilor District elections were also conducted during the Annual Session. In accordance with a resolution passed at the 1978 Interim Session, an additional Councilor is allowed a District for each 400 members or portion thereof. Thus, the Council is now composed of 18 Councilors. The following Councilors were selected from the even-numbered Districts and additional Councilors from the Third and Seventh Districts:

Second District
Dr. John H. Walterscheid, Hannibal

Dr. Richard Bradley, MSMA President-Elect, (left) and Dr. McCanse consult during Annual Session.

Third District
Dr. Thomas J. Cooper, St. Louis
Dr. Richard H. Fallon, St. Louis
Dr. James M. Stokes, St. Louis
Dr. J. Otto Lottes, St. Louis
Dr. Theodore L. Paletta, St. Louis
Dr. Frederick D. Peterson, St. Louis

Fourth District
Dr. Louis P. Hetlage, Troy

Sixth District
Dr. R. John Torontow, Nevada

Seventh District
Dr. Donald McIntosh, Kansas City
Dr. Ronald A. Youmans, Kansas City

Eighth District
Dr. Walter A. German, Springfield
Dr. Marvin A. Singleton, Joplin

Tenth District
Dr. Eugene T. Hansbrough, Poplar Bluff

These Districts also selected Vice Councilors:

Second District
Dr. Patricio Avila, Hannibal

Third District
Dr. Gerard M. Callaghan, St. Louis

Officers and Councilors selected during the 1979 Annual Session are: (left to right) Drs. Donald McIntosh, Councilor, Seventh District; Milton B. Ozar, Vice President; John Torontow, Councilor, Sixth District; and Walter A. German, Councilor, Eighth District.

Fourth District
Dr. Paul H. Rother, St. Charles

Sixth District
Dr. A. J. Campbell, Sedalia

Seventh District
Dr. William D. Hoadley, Kansas City

Eighth District
Dr. Charles J. Ash, Springfield

Tenth District
Dr. George H. Ladyman, Poplar Bluff

In a Council meeting following the MSMA House of Delegates session on April 22, the Council elected Dr. E. T. Hansbrough as Chairman of the Council and Dr. Louis P. Hetlage as Vice Chairman.

The Council also re-elected Dr. John I. Matthews, Jefferson City, as Secretary of the MSMA and elected Dr. Carol F. Williams, St. Louis, as Treasurer.

New MSMA Council Vice Chairman, Dr. Louis P. Hetlage, Troy, (left) and Dr. Eugene T. Hansbrough, Poplar Bluff, Council Chairman.

Additional newly elected MSMA officers and Councilors are: (left to right, seated) Drs. Theodore Paletta, Third District Councilor; J. Otto Lottes, Third District Councilor; John H. Walterscheid, Second District Councilor; Carol F. Williams, Treasurer; (standing) Richard H. Fallon, Third District Councilor; Gerard Callaghan, Third District Vice Councilor; James Stokes, Third District Councilor; and Thomas J. Cooper, Third District Councilor.

Physicians win calculators

Eight pocket calculators were given away as attendance prizes at this year's Annual Session. Names of physician winners were drawn from cards submitted to the Technical Exhibits booths.

The winners were: Drs. Hector Barragan, St. Louis; H. H. Bowerman, St. Louis; Arnold Brody, St. Louis; John R. Dixon, Brookfield; O. A. Griffin, Buffalo; W. T. Gunn, St. Louis; Ruth Kauffman, Versailles; and Stanley Roper, Ozark.

Annual Session

Continued

- Punitive Damages — Directs the Council to research awards for punitive damages in medical liability cases, and to report back to the House.
- Alcoholic/Adjunctive Treatment Resources — Encourages physicians to use the resources of Alcoholics Anonymous, Al-Anon, Ala-Teen and National Council on Alcoholism.
- Alcoholic/Traffic Offenders — Referred to the Council this resolution dealing with handling of alcohol related traffic offenders.
- Alcohol & Drug Abuse Education — Recommends that a uniform policy be adopted regarding alcohol and drug abuse education and that Driver Education classes include in-depth education on drug and alcohol abuse as related to traffic safety.
- Alcoholism/Pharmacy Cooperation — Resolves that the MSMA cooperate more closely with the pharmacists in a public education program aimed at developing awareness of the problem of abuse of legally prescribed drugs and alcohol.

Most physicians using new prescription form

The law requiring the use of prescription forms with two signature lines has now been in effect for over four months and most physicians are using the new forms.

"An overwhelming majority of physicians in Missouri have made the conversion to the new prescription form," said Gary Clark, Executive Secretary of the State Board of Registration for the Healing Arts.

The new form has two lines near the bottom of the form. Under the line on the right side the words "Dispense as Written" must appear. Under the line on the left side the words "Substitution Permitted" are required.

Although most doctors have switched over to this form, a small minority have not, said Mr. Clark. "I don't believe it is a willful violation, but rather a matter of the doctors not being acquainted with the law."

The Board of Healing Arts has received a few complaints about the forms not being used from the Board of Pharmacy inspectors. When a physician fails to use the required form and the pharmacist fills the prescription, it is at that point an illegal prescription and the pharmacist, too, is in violation of the law.

Mr. Clark stresses that all physicians should be using the required prescription form. The new law does not restrict the physician's ability to use professional judgment in prescribing drugs, so using the form is in everybody's best interest, especially the patient's, said Mr. Clark.

Medical news in brief

Medicaid workshops planned

On August 1, 1979, Electronic Data Systems Federal will become the fiscal agent for the Missouri Medicaid Program. E.D.S. Federal and the Department of Social Services will be working together to install a Medicaid Management Information System (MMIS). This system calls for comprehensive reporting and claims processing procedures which result in some changes in claim forms and billing procedures.

To ensure a smooth transition process, the E.D.S. Federal Professional Relations staff has planned a series of workshops throughout the state for physicians and their billing staffs. These workshops will focus on billing instructions and policy guidelines with special emphasis on claim filing procedures.

Following is the schedule for the Medicaid workshops to be held in Missouri.

DATE	CITY	TIME	PLACE
May 31	Columbia	8:30 AM	Hearns Bldg., Rm. #334
June 4	Springfield	8:30 AM	Howard Johnson's, Convention Center
June 7	Poplar Bluff	8:30 AM	Holiday Inn, Turquoise Room
June 11	St. Louis	8:30 AM	University of Missouri, J.C. Penny Aud.
June 14	Kirksville	8:30 AM	Oak Tree Inn
June 18	Kansas City	1:00 PM	Hilton-Airport
June 21	St. Joseph	8:30 AM	Ramada Inn
July 5	Columbia	8:30 AM	Hearns Bldg., Rm. #334
July 9	Kirksville	8:30 AM	Oak Tree Inn
July 12	St. Louis	1:00 PM	University of Missouri, J.C. Penny Aud.
July 16	Poplar Bluff	8:30 AM	Holiday Inn, Turquoise Room
July 18	Springfield	8:30 AM	Hilton Inn
July 20	Kansas City	8:30 AM	Hilton-Airport
July 24	St. Joseph	8:30 AM	Ramada Inn

Dr. Riggio appointed to Board of Healing Arts

Salvatore N. Riggio, M.D., St. Louis, was recently appointed by Governor Joseph Teasdale to the State Board of Registration for the Healing Arts.

Dr. Riggio was appointed for a four-year term. He replaces Joseph C. Blanton, M.D., Sikeston.

Along with a private practice of Pediatrics, Dr. Riggio is also an assistant professor of Pediatrics at the St. Louis University School of Medicine.

Terms approved for chiropractic litigation

Terms of the partial settlement agreement in the Pennsylvania chiropractic litigation were approved April 16 by U.S. District Judge John Fullum in Philadelphia.

The agreement was signed by the plaintiffs and seven defendants, the AMA, the Pennsylvania Medical Society, the American Hospital Association, the Hospital Association of Pennsylvania, the Joint Commission on Accreditation of Hospitals, the Pennsylvania Association of Pathologists and North Penn Hospital.

Two defendants, the American College of Radiology and the Pennsylvania Society of Radiologists, did not take part in the settlement.

The settlement agreement as endorsed in December by the AMA House of Delegates affirms that each physician member may decide for himself or herself whether to accept or decline a patient sent by a licensed, limited practitioner. The AMA is not bound by the terms of the settlement as to any other settling defendant.

The AMA position on chiropractic continues to affirm that there have been no developments since 1966 that would provide scientific support for the use of spinal manipulation as appropriate treatment for ailments such as hypertension, heart disease, stroke, cancer, diabetes and infections.

Further, the settlement of the Pennsylvania case does not prevent the AMA or other defendants from expressing their views on chiropractic.

Blue Shield adds chemotherapy benefits

Blue Shield has added benefits for chemotherapy to the UCR and Superior Programs, effective March 5.

Services for the administration of approved drugs (antineoplastic agents) in physicians' offices and hospitals are provided except when the treatment is experimental in nature or for research.

Benefits will be provided when the following routes of administration are used: parenteral (excluding subcutaneous or intramuscular), continuous or intermittent infusion, perfusion and intracavitary. Benefits are not available when oral drugs are used.

Medical assistants workshops cancelled

The workshops for physicians' office personnel, "You, the Telephone Manager" and "Medical Collection Management," which were scheduled for June 6 and 7, have been cancelled.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

STRATEGIC FINANCIAL PLANNING EXPANDS YOUR HORIZONS

Many health care professionals have discovered an excellent plan to create capital for a variety of uses.

Could you use $10,000 to $100,000+? Take your assets out of limbo and convert them into cash through our sale/leaseback program. Hempel Financial Corporation will buy your office equipment and lease it back to you for payments that are **100% tax-deductible**. Your bank relationships and lines of credit are not affected, and all transactions are strictly confidential. Hempel has virtually unlimited funds to meet the needs of physicians and dentists nationwide. For your free brochure describing our sale/leaseback program, as well as our other financial plans, **call toll-free (800) 421-7177; in California, call collect (213) 475-0304.**

HEMPEL
FINANCIAL CORPORATION
10880 Wilshire Blvd.
Los Angeles, CA 90024

Photo-Comment by James W. Clawson, M.D., Springfield

Hope Raff Nadir doesn't hear about water intoxification. He might try to ban water.

Editor's Corner

BEYOND AESOP

Let me relate a true story.

A friend of mine moved to a different city. He already knew he had a variety of health problems. Shortly after moving, he went to a recommended doctor for an examination.

A bit later, I visited with him about his trip to the doctor. "How did you like it," I asked.

"I was much impressed," he replied. "He had a beautiful office. There was a lot of fancy equipment. I saw all sorts of diplomas on the wall, so I am sure he must be a very smart man. He also had a nurse who was a very pleasant sight, indeed."

"What did the doctor tell you," I inquired.

"He said I am in rocky shape. He prescribed a very stringent diet. He told me that alcoholic beverages were definitely out. I must stop smoking at once. He gave me three kinds of pills."

"Well, well," I said, "this is all very interesting. What did you think of it?"

"I thought the doctor was completely right and that he was very thorough."

"So," I asked, "What did you do?"

"I'll tell you," he replied pensively as he blew a ring of smoke toward the ceiling. "I gave it some thought."

"And, then?"

"I found another doctor," he said softly.

* * *

And, my friends, for those of you who are good and true students of human nature, you will find a lesson there.

Wilfred E. Wooldridge, M.D.

Special Article –

The Art of Healing

By
PHILIP A. TUMULTY, M.D.
Baltimore, Md.

Introduction

It means so much to me that you have asked me to join with you in celebrating this, your day of days. And, in a sense, I am graduating with you, for in a few weeks I shall become Emeritus. At this particular point, how rewarding it is to meet with you once more to discuss matters which I believe are highly important to both of us. For I am reaching what I would best describe as the gloaming of my clinical life.

Ever since I can recall, the gloaming has been my favorite part of the day. With it comes a peace and a lovely, gentle quietude. One hears the calling of birds, and other sounds of nature much more distinctly, as, for a time, the distracting noises of our machine-made world seem to fade. And even though shadows are deepening, one seems able to perceive things more vividly as they are viewed outlined against the brightness of the setting sun. There is a joy and a relief and a renewal which come with the gloaming of the day, and when there is fatigue from its stresses, a refreshment. It is a time for looking back, as well as forward, for reevaluation of goals and purposes, for uncluttered reappraisal of the genuine significance of what one has been doing.

I would like now to review with you some of these reflections as they pertain to the art of healing, and our preparation for it.

The Person as Patient

Let's start appropriately with some reflections about the nature of the subject of our clinical lives, namely, the patient.

What is a patient? First of all, he is a person. Among other definitions, a person may be said to be a synthesis of some elements which lend themselves to physical assay and of other elements which do not. Sickness may originate in either one or both of these two interdependent components; when this happens, the person becomes a patient.

As clinicians, you will be constantly impressed by the unity of this complex of ponderable and imponderable factors in your patients. You will never encounter sickness in the one which does not reflect itself in the other, to a greater or to a lesser degree. It is imperative, therefore, that you have knowledge of both, be concerned about both, and understand how to affect both.

Unfortunately, as you already appreciate, so many of these factors remain obscure. So often, all a clinician is able to bring to bear upon sickness is his genuine interest, his skilled support and his heartfelt solace. However, as your experience with patients grows even larger, you will rapidly discover just how healing these alone can be.

Unless you are unlike other generations of clinicians who are just aborning, you will almost instantly become preoccupied with the ponderable ills of your patients, for they can be seen, felt and listened to, and they lend themselves to treatment which is visibly applied, sometimes in very dramatic ways, like sewing in a brand-new heart. Far too often, the imponderable elements become lost in the shuffle or are shunted off to someone else's care. I must be utterly frank with you: if this is to be your attitude, you cannot possibly become an effective clinician.

From a purely practical standpoint, illnesses originating within the imponderable elements of a person are exceedingly common. They accounted for roughly 30% of our revered Dr. Louis Hammann's consulting practice, and in another 20%, organic illness was markedly affected by factors of the person. Dr. Hamman pointed out that reaching an accurate diagnosis is quite impossible unless the clinician is able to assay and interpret these elements correctly. Lastly, therapeutic planning which ignores the imponderables cannot possibly be effective, since it will not produce insight and motivation within the patient. And

---

"The Art of Healing" by Philip A. Tumulty, M.D. Reprinted with permission from *The Johns Hopkins Medical Journal*, Vol. 143, No. 4, October, 1978, pages 140-143. Copyright© 1978 by The Johns Hopkins University Press. All rights of reproduction in any form reserved.

insight and motivation are the two sine qua nons for the recovery of any patient from any illness.

A patient is a very special kind of a person because he is a sick person. Here are some dominant characteristics of sick persons which have impressed me through the years. Universally, patients are anxious; they are frightened; they inwardly anticipate the very worst, although they may cover up with apparent lack of concern. Some are very brave, while others cling in terror. All grasp tightly to life, and in all, some glimmer of hope, no matter how flickering, is essential to the vitality of their spirit.

It follows that the principal function of a clinician is to give substance at all times to this universal reaching out for hope. This conviction strongly contradicts the now-popular dictum that a physician should always "level" with his patients about their state of health, telling them the facts exactly as they are, even if this information tears away the patient's grasp on hope. In my judgment, this approach is entirely destructive and is to be deprecated. A wise clinician molds the truth so that it always contains some hope, for he realizes that a state of acute or chronic anxiety induces important physiological reactions as well as destructive emotional and interpersonal ones.

Many patients are querulous and demanding. Reassurance must be piled upon reassurance, and explanations have to be reexplained. Much of what the clinician tells the patient today will be entirely forgotten by tomorrow. All patients are exceedingly sensitive and suspicious because of their inward fears. They will analyze and reanalyze your every word, your questions, your gestures and even the inflections of your voice and the expressions on your face.

As a result, a not inconsiderable number of patients are hurt by clinicians who are careless or thoughtless about these matters. Unfortunately, this is becoming a common event in this day of medical-legal sensitization. So many physicians, fearful of being sued, are practicing what should be called "self-defensive medicine" which, shamefully, at times places the welfare of the patient below that of the physician in his communication with the patient and his family. To me, this is entirely repugnant. How wrong for a physician to seek to protect himself against suit by the employment of measures which breed needless fear and anxiety within a sick person; yet, the use of these measures is now becoming a common practice.

A large number of patients become highly dependent. The clinician becomes the confidant, the port in the storm, the shield, the father confessor, the only one who listens, who cares or who understands. What an awesome responsibility to realize that a fellow human being regards you as his one and only link to health or to happiness!

We are pleased and privileged for Missouri Medicine to publish this article by Dr. Philip Tumulty, Professor Emeritus of Medicine, The Johns Hopkins Hospital. Dr. Tumulty delivered this address at the commencement ceremony of the graduating class of the Johns Hopkins University School of Medicine on May 26, 1978.

There is much gentle and profound wisdom in this article. Any physician, and particularly the emerging physician, would do well to take Dr. Tumulty's message to heart for it is the distillation of thought and experience of a great and wise educator and clinician. — Ed.

Finally, most patients will be only partially cooperative in following your advice, especially if what you recommend involves the employment of self-denial and self-discipline. Thus, in the matter of a few minutes, it is not difficult to persuade a patient to have a subtotal gastrectomy, whereas hours of talk may fail to motivate him to adhere to a diet, take essential medications regularly or stop harmful habits.

Qualities of the Clinician

These and other characteristics of patients make the role of a clinician uniquely demanding. A clinician must be patient and forebearing, strong yet gentle, unselfish of his time and unstinting in his efforts. He must be willing to bite his tongue and to turn his cheek. He must have an attentive ear as well as the ability to question probingly. His attitude must create trust and confidence, and his manner thoughtfulness and security. What the patient can't put into words, the physician must understand. What the patient won't put into words, the physician must speak for him. He must hear what the patient doesn't say and be sensitive to the anguish which cannot be expressed. He must foresee the sensitivities of his fellow who is suffering and be able to forestall them. He must see himself in others, recognizing that at the same time that he extends downward one helping arm, he is reaching upward for support for himself with the other. This is compassion.

More than anything else, a clinician must come to understand the varied facets of human nature, and through sometimes disfiguring ugliness, see the immutable value of the human spirit beneath. Because of his familiarity with human nature, a clinician should always be too sophisticated ever to be surprised or shocked; too understanding ever to sit in critical judgment; too large in his viewpoints ever to act in a small, cheap or mean way; too sensitive ever to be unfeeling; and too aware of the evanescence of life to become dominated by materialism.

The Importance of Spending Time with the Patient

From a purely practical standpoint, these special characteristics of patients lead to but one conclusion regarding the practice of clinical medicine — it is simply not possible to give excellent care to patients in a quick, easy or offhand fashion, or through the agency of some aid or substitute.

Time personally spent with the patient is the most essential ingredient of excellence in clinical practice. There are simply no short cuts and no substitutions.

There must be time to assay the patient's intellectual and psychological elements; time to meticulously gather each piece of clinical evidence from the history and the physical examination; time to analyze these data and to add to them other helpful information from special studies and consultations; time to evolve a plan of management when diagnostic conclusions have been reached. And, above all, there must be time for the patient to communicate himself to you, and you to him. Without adequate time, you cannot possibly give sufficiently of yourself to your patients. Time is what they expect and what they need.

The Importance of Communication

In addition to time, another highly essential ingredient of excellence in medical practice is the ability to communicate effectively with patients and their families. The modern physician is indeed a doer when it comes to applying a wide variety of diagnostic and therapeutic techniques to his patients. But as an effective conversationalist, he is sometimes a dud. It is my strongest conviction that it is lack of this particular ingredient of excellent care which today's patients notice most critically.

Without satisfying communication, one may inwardly feel for the patient, but not outwardly with him. True compassion is a product of sensitive communication, and this is what patients long for. In the absence of satisfying communication between the patient and his physician, the physician's scientific knowledge is thwarted, his sensitivity for the patient becomes sterile, and his power to heal is lost. Yet how often are patients and their families chagrined because there is inadequate time or little effort made to enable them to communicate with their physician in a meaningful way. Or worse still, there is often hurried, poorly structured or inept conversation. I firmly believe that few things in all of medicine are associated with a higher morbidity rate!

Understanding, motivation, peace and confidence are the products of well-considered conversation. Confusion, negativism, anxiety, lack of compliance and law suits are born of failures in communication.

In terms of time spent in dialogue with the patient, how unfortunate it is that present forms of financial compensation for medical care completely ignore these clinical facts of life and base their payment scales primarily upon what one does to the patient through the application of some sort of technical procedure. Nowadays, the financial payoff in clinical medicine, thanks to this poorly conceived system, is in doing things to the patient, not in meticulous gathering and analysis of all of the clinical evidence and in therapeutic dialogue with him and with his family.

In addition, while the use of so-called physician's assistants or associates has practical advantages in some circumstances, be certain that you do not turn over to them by default your primary roles as a clinician: taking the history, performing the physical examination and communicating with your patients and their families. Unfortunately, this abandonment of responsibility is just what is taking place today in many areas throughout this country. By default, the clinician becomes just a technician, sticking various instruments down, in or up his patients, and doling out various forms of treatment.

Learning from Patients

As clinicians, from the very start, you will begin to develop familiarity with the tragedy of illness. Observe it, study it and, most of all, feel it. Let it become a positive force within you. As life advances, you will be exposed to your share of the "slings and arrows of outrageous fortune." There are, of course, a number of ways of meeting these adversities. Let me give you an ancient prescription: Heal your own wounds with balm from the wounds of others.

Through the fears and the anxieties of your patients, acquire stamina and equanimity. Through their suffering, learn about patience, forebearance, courage and the power of faith. Through their errors, learn wisdom. Through their human weaknesses, develop understanding, compassion and forgiveness. By instilling confidence into the despairing, become optimistic yourself. Through the death of a patient, learn much about life. Learn that each day is only lent to you. Learn that as a physician, you must make productive use of life based upon service to others. Learn how unsubstantial is a life built upon materialism, and the essentiality of seeing in life the invisible, of feeling the imponderable. Learn the ingredients of a satisfying life. Learn that for a physician, healing of yourself takes place through the healing of others. This means making your medical career a vocation.

THE RESPONSIBILITIES OF LEADERSHIP

Today, young physicians, you take your first step in becoming a part of a tradition. Now, as such, you have been given many things of priceless value, among them being:

1. Respect for truth.
2. A desire for good.
3. A striving for excellence.
4. An ability to self-educate, and an incentive to continue to do so.
5. An imaginative urge to explore the unknown.
6. Tolerance for anyone's ideas, and respect for the God-given dignity of all men.
7. Self-discipline and maturity enabling you to work cooperatively as a member of a group.
8. Willingness to labor hard and effectively, particularly for others.
9. Appreciation of the inestimable value of true excellence in teaching, in patient care and in research. And, furthermore, realization that in clinical medicine, the pursuit of excellence is no vain posture, something contrived within an ivory tower to be bestowed upon a benighted few. You have seen that excellence may be the difference between giving a patient a chance to recover and losing him; between varying degrees of disability and full recovery; between helping and harming; between creating happiness and causing great sorrow.
10. A first-hand understanding of the needs of the sick poor. In this regard, never forget that Johns Hopkins founded this place, not primarily as a monument to medical science, but, and I quote from his will, "To take care of the sick poor of Baltimore." I strongly suspect that this charge, and its subsequent fulfillment, may be an important part of the Hopkins magic.

Surely, you have not just been exposed to these things. By now, they must have become a part of you.

Soon you will be playing a major role on hospital staffs, in medical societies, governmental agencies and medical faculties. This, too, is an important part of your Hopkins tradition. The kind of leadership you can give is so badly needed to ease a number of present problems.

We have failed utterly to communicate to various private and governmental agencies, and to the American people in general, a genuine understanding of the real constituents of excellence in medical care. Excellence in medical care comes not from administrative structures but from able clinicians; money and manpower should be expended on the development of the latter, rather than the former.

Many medical educators have shown a destructive, heedless and insistent preoccupation with acceleration, free time, early specialization and course election. This policy is starting to produce students who are under-educated because they are being under-taught. Intensive basic and clinical educational experiences of a broad nature are being replaced by courses that are at best introductory, offering only a lick and a promise, and by elective periods poorly employed. A plethora of elective courses in various specialty areas does not compensate in any way for a paucity of learning experiences and of structured teaching in the broad essentials of clinical medicine. These include the art and techniques of gathering all of the clinical evidence; the approach to its analysis, problem-solving, diagnostic and therapeutic management based upon one's familiarity with the natural course of disease and with human nature; and the ability to communicate effectively. The phrase "innovative new teaching program" has been a catchword of medical educators for the past two decades; it is wearing out and should be replaced. In my opinion, the phrase has been a grant getter but a quality loser.

Opportunities must be provided to learn the humanities as well as the science, of medicine. Thus, sessions should be devoted to a consideration of the total impact of an illness upon a patient. What are all the factors — physical, psychological, spiritual, social, and financial — which will have an impact upon the patient and his family as a result of his illness, and how can they be best managed? What kind of total resources can the physician marshal to help him help the patient? How can the physician and others on the health team (social workers, physical therapists and so forth) best meet their individual responsibilities in attempting to offset, alter and improve all of these factors, employing in the best possible way any and all available medical, social and other resources? Dealing with these questions is, indeed, medical "care" in the real sense of the word, and not just the administration of medicine or the application of treatment. Such terms as primary care, secondary care or tertiary care are, in fact, meaningless. There is really a choice between only two kinds of care: good or bad, adequate or inadequate, complete or incomplete.

An urgent need exists for methods of payment for medical care so that they strongly stimulate the practice of excellent patient care in its fullest meaning, rewarding not just the technical doers, the dispensers of treatment and those who meticulously complete all of the involved forms and signature requirements of insurance carriers. Today, one can easily practice second-rate medicine and still satisfy every requirement of administrative medicine. As so often happens when organization and administration become dominant in clinical medicine, the form becomes more important than the substance, the letter more significant than the spirit.

Above all, the creation of an administrative hierarchy to lead and dominate those who teach, those who care for patients and those who perform the research must be avoided at all costs, for administration has a way after a while of becoming so large, so inflexible and so unresponsive that it smothers and kills the very things it was created to develop.

Finally, may your experiences as clinicians make vivid the dualism of the nature of man. Give his spiritual and mystical and imponderable components any name or any explanation which best satisfies your own rationalization, but do recognize that they exist, and serve the complete man with all of your resources.

As physicians, let your goal be increasing excellence of the clinical care you give.

Let your leadership come from those mild, gentle, yet strong minds which through the generations have tried to teach us how to serve each other through mutual love and charity; their messages are similar in theme though dissimilarly expressed, but unfortunately, have been distorted by various forms of parochialism.

If you will persistently educate yourself and discipline yourself to be excellent clinicians, your future life will inevitably exert a positive social force. And this is what Mother Hopkins, your relatives and I pray for you today. God bless you, your families and your futures.

There's not one atom of yon earth
But once was living man;
Nor the minutest drop of rain,
That hangeth in its thinnest cloud
But flowed in human veins.
P. B. Shelley
Queen Mab II, 1813

Every clod of loam beneath us
Is a skull of Alexander;
Oceans are the blood of princes;
Desert sands the dust of beauties.
R. W. Emerson
From the Persian of Hafiz, 1851

MOVED

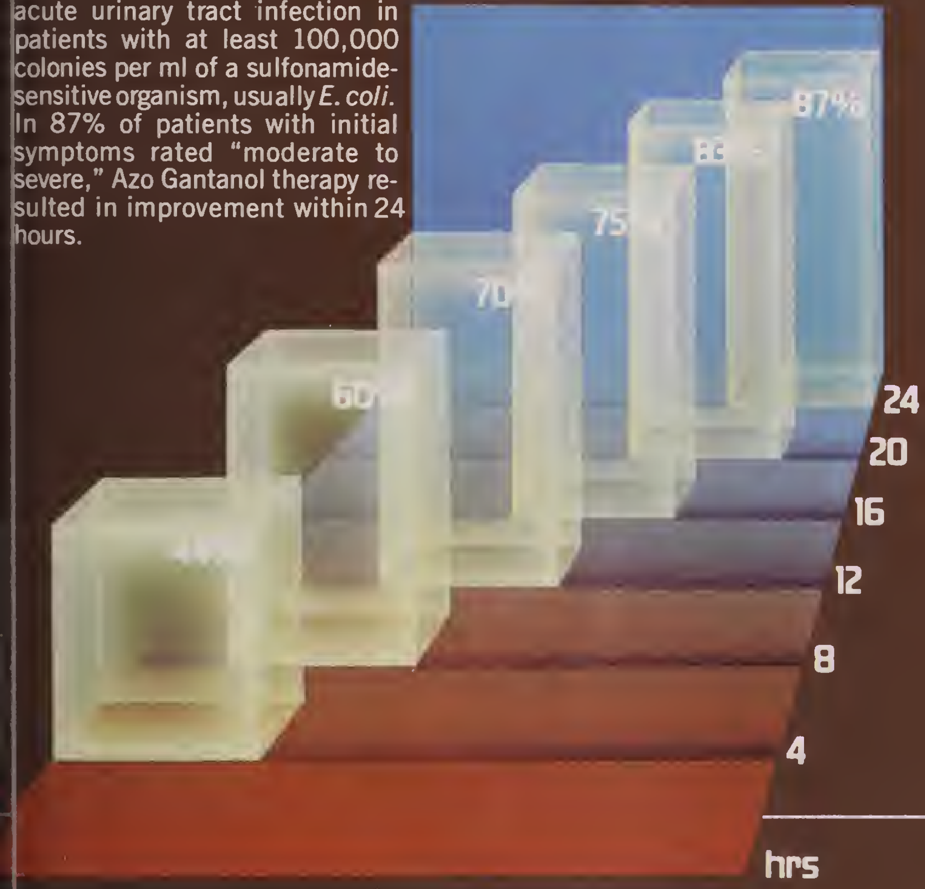
The St. Louis
Blue Cross and Blue Shield
MAJOR MEDICAL
DEPARTMENT
has a new address:
4444 Forest Park Blvd.
St. Louis, Missouri 63108
and new telephone numbers:
(314) 658-4500
or toll free in Missouri
(800) 392-8740 Sta. 4500

Saint Louis
Blue Shield
A COMMUNITY SERVICE

Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

ach tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for
the pain

for
the pathogens

ata on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

Before prescribing, please consult complete pro uct information, a summary of which follows:
Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organism (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note: Ca fully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; ad aminobenzoic acid to follow-up culture media. T increasing frequency of resistant organisms limit the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.
Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term an during nursing period; because Azo Gantanol co tains phenazopyridine hydrochloride it is contrai dicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G. disturbances.
Warnings: Safety during pregnancy not establish Deaths from hypersensitivity reactions, agranul tosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC an urinalysis with microscopic examination are recommended during sulfonamide therapy.
Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.
Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypopro thrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis) *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hyp glycemia. Cross-sensitivity with these agents ma exist.
Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.
NOTE: Patients should be told that the orange-r dye (phenazopyridine HCl) will color the urine.
Supplied: Tablets, red, film-coated, each contain ing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche In
Nutley, New Jersey 07110

A reminder

ZYLOPRIM®
(allopurinol)
100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

INDICATIONS AND USE: This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim® (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

CONTRAINDICATIONS: Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.

WARNINGS: ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy particularly in patients with pre-existing liver disease.

Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

In patients receiving Purinethol® (mercaptopurine) or Imuran® (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

Usage in Pregnancy and Women of Childbearing Age. Zyloprim® (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

PRECAUTIONS: Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or subnormal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

ADVERSE REACTIONS:

Dermatologic: Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.

A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

Gastrointestinal: Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

Vascular: There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angiitis which have led to irreversible hepatotoxicity and death.

Hematopoietic: Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim® (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

Neurologic: There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

Ophthalmic: There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

Drug Idiosyncrasy: Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

OVERDOSAGE: Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

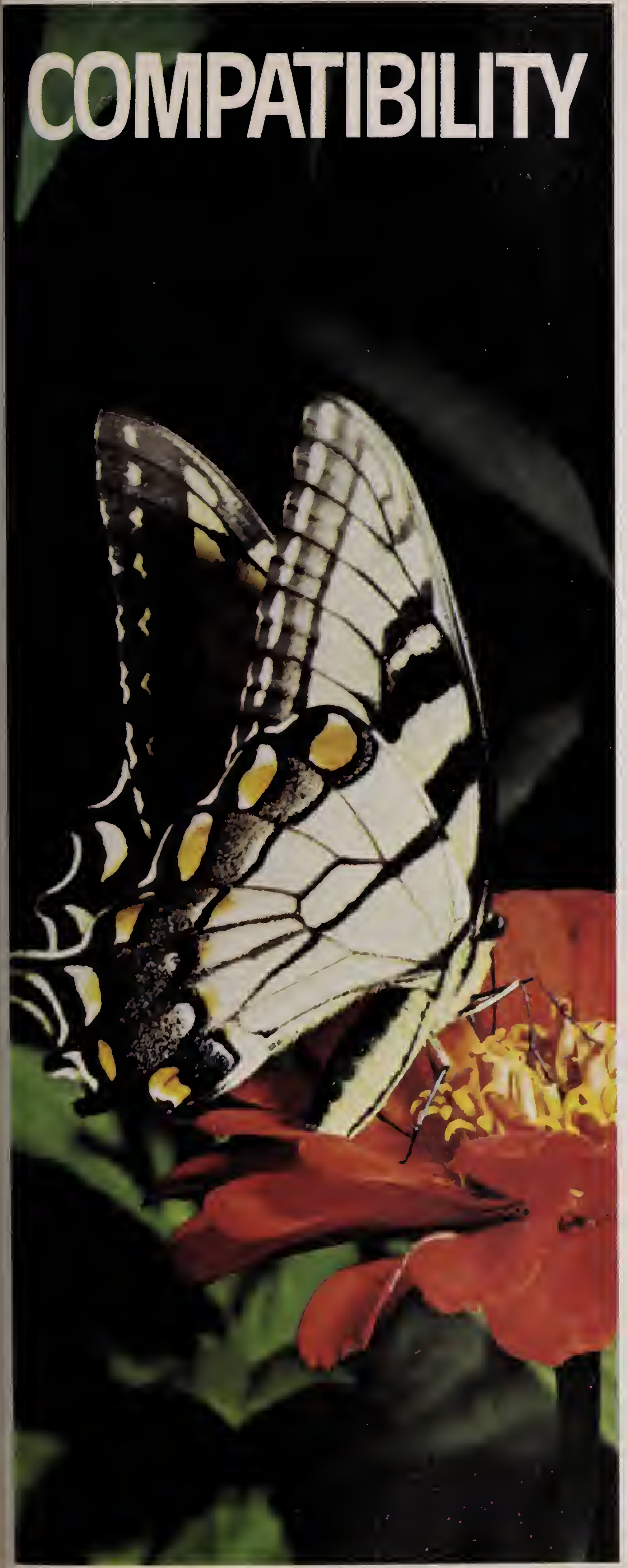
HOW SUPPLIED: 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709



Does it influence your choice of a peripheral/cerebral vasodilator*?

- Vasodilan—compatible with coexisting diseases
- Vasodilan—compatible with concomitant therapy
- Vasodilan—compatible with your total regimen for vascular insufficiency

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:
Possibly Effective:
1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

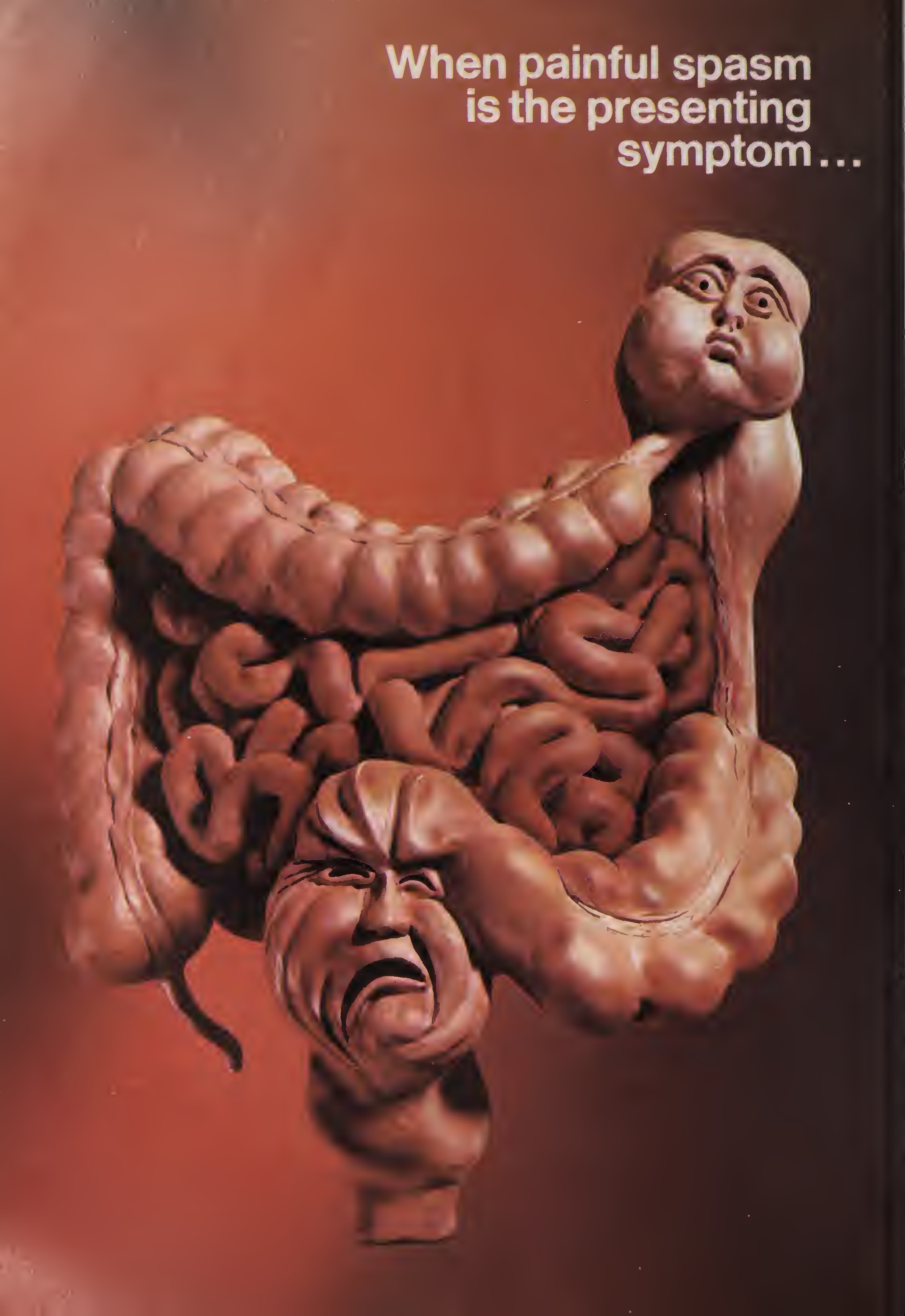
Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

VASODILAN®
(ISOXSUPRINE HCl)
20-mg tablets

MeadJohnson PHARMACEUTICAL DIVISION

© 1978 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 U.S.A. MJL7-4268


When painful spasm
is the presenting
symptom . . .

in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

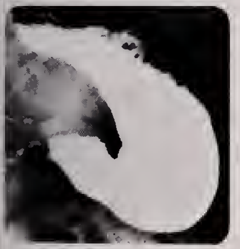
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.

Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

“The correlation of spasm relief and drug given was excellent.”

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

6-4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS
Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient. unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION. Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg. capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults.* 1 tablet three or four times daily. Bentyl Injection. *Adults.* 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC. Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Merrell
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215 U S A

in Brief

A summary of AMA, medical & health news

THE FIRST 1979 "Opportunity Placement Register," which lists 5,178 openings for physicians, is being sent to each physician registered with the AMA's Physicians' Placement Service. The quarterly publication is available to all interested physicians. Also available is the latest quarterly issue of the "Physician Placement Register," which contains brief vitae of 5,076 physicians seeking new positions and which is being sent to each "opportunity" registered with the Placement Service. For further information, write to Physicians' Placement Service, AMA Headquarters, specifying which register you are interested in.

TESTIFYING BEFORE two Senate health subcommittees, the AMA urged rejection of the Carter Administration's cost containment bill, which would impose controls on hospital expenditures if the rate of increase exceeds 9.7% this year. The proposal would "quickly result in a reduction in availability of care — a rationing of care according to the financial whims of the secretary of HEW," AMA witnesses said. They charged that attention should be focused on federal deficits and monetary policy, attributed generally as root cause of the current inflation problem, rather than on the hospital industry.

SAMPLE SETS of surgical criteria are being developed by the AMA, in conjunction with 14 national specialty societies, under a contract with HEW. The sets are to be designed for use in screening surgical cases to select those which should be subjected to peer review. They will be developed for procedures that account for about 75% of the surgical activity within each major area of surgical specialization. The AMA and the American Society of Internal Medicine will distribute the draft criteria to specialty societies for comment. HEW will distribute drafts to all PSROs and will test draft sets at seven PSRO sites.

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

well G. Bennett
ltone Hearing Aid Service
8 W. Walnut Street
ringfield, Missouri 65806
(17) 866-0551

n Gidley
ltone Kansas City Hearing Aid Service
O1A Grand Avenue
nsas City, Missouri 64106
(6) 471-1943 (816) 471-4105

ltone Hearing Aid Service
2 Kirkpatrick Building
Joseph, Missouri 64501
(6) 279-6501

n Hicks
tone Hearing Aid Service
rth Park Mall
1 Range Line Room 248
plin, Missouri 64801
(7) 624-0931

an Jones
tone Hearing Aid Service
. Box 682 400 E. High
ferson City, Missouri 65101
(4) 635-3557

tone Hearing Aid Service
2 North 10th
lumbia, Missouri 65201
(4) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Service
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Service
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Service
State Fair Shopping Center
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

Beltone Hearing Aid Service
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Service
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

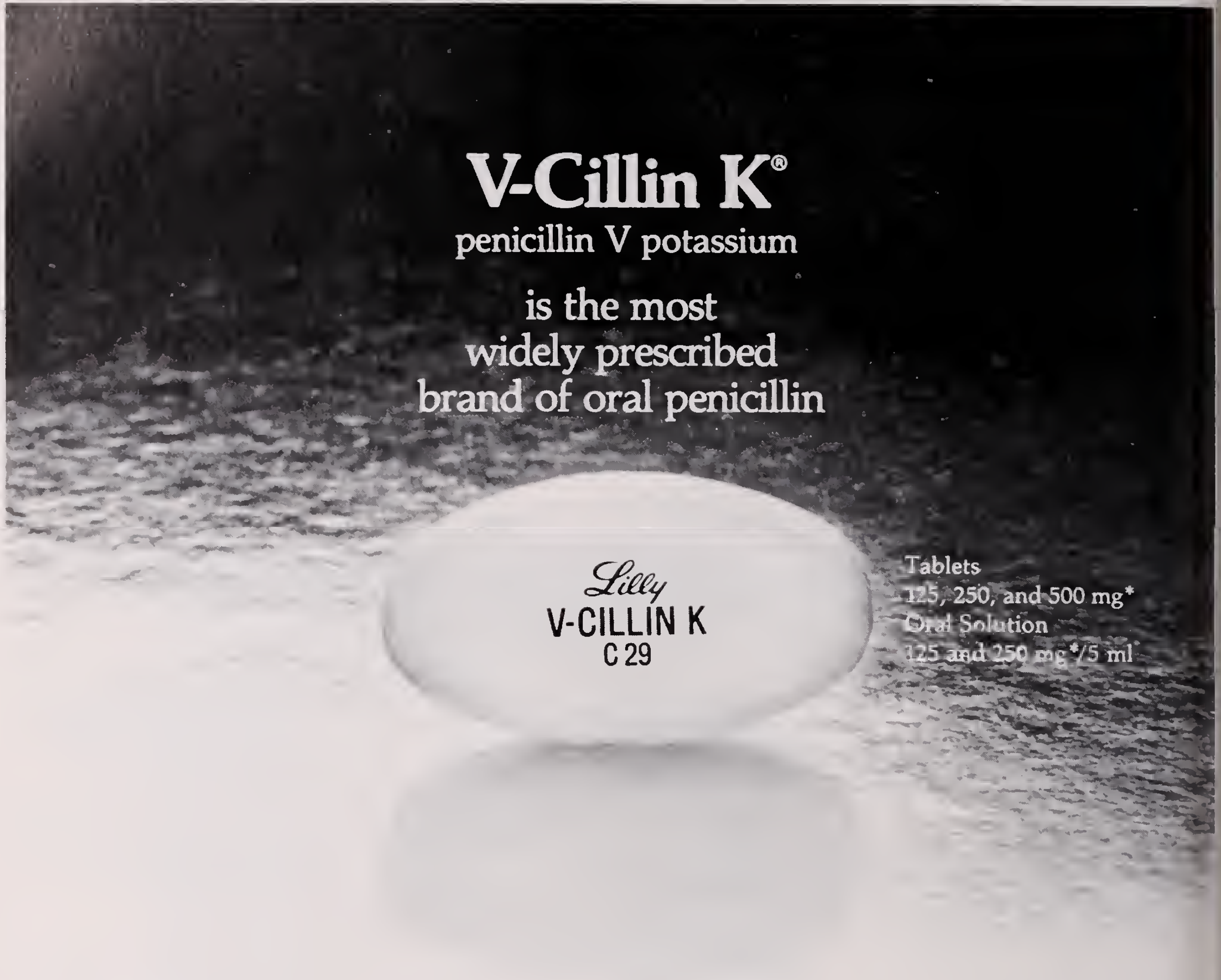
Beltone Hearing Aid Service
320 Spring
Sweet Springs, Missouri 65351
(816) 335-6727

Beltone WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

V-Cillin K®

penicillin V potassium

is the most
widely prescribed
brand of oral penicillin



Tablets
125, 250, and 500 mg*
Oral Solution
125 and 250 mg*/5 ml

V-Cillin K®
penicillin V potassium

Description: V-Cillin K is the potassium salt of penicillin V. This chemically improved form combines acid stability with immediate solubility and rapid absorption.

Indications: For the treatment of mild to moderately severe pneumococcal respiratory tract infections and mild staphylococcal skin and soft-tissue infections that are sensitive to penicillin G. See the package literature for other indications.

Contraindication: Previous hypersensitivity to penicillin.

Warnings: Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

Precautions: Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin. [102175]

***Equivalent to penicillin V.**

Additional information available to the profession on request.

Lilly

Eli Lilly and Company
Indianapolis, Indiana 46206

900416

Volume 76, Number 5 — May, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1979 BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

LAWRENCE M. LAMPTON, M.D. *and*
DANIEL H. WINSHIP, M.D., *Columbia*

The 'No Code Blue' Issue: Missouri Is Not Massachusetts

RECENTLY, there has been a multitude of articles discussing various court decisions regarding medical practice activities in Massachusetts, Maine and New Jersey.[1-3] Unfortunately, these cases have been collectively referred to as the "No Code Blue" issue by both the medical press and he public media when, in fact, their relationship o this medical activity is not the issue addressed.[4-6] Only the Massachusetts Appeals Court decision "In the Matter of Shirley Dinnerstein"[7] and the California Natural Death Act[8] are addressed directly to the issue of limiting extraordinary care. In both instances, it is recognized that this question is "peculiarly within the competence of the medical profession," especially he "attending physician in keeping with the highest traditions of his profession."[7]

It is interesting to note that a majority of the articles appearing in the medical literature have been authored by lawyers, social scientists, clergymen and nurses and very few are by physicians. Cognizant of the publicity given to the medical practice of limiting extraordinary care, we have explored the literature concerning the topic as well as engage in in-depth departmental discussions regarding the principles involved.

Missouri has no statute defining "death." A Missouri Supreme Court decision has cited the common law definition contained in the 1962 edition of Black's Law Dictionary, which states that death is "cessation of life; ceasing to exist; defined by physicians as a total stoppage of the circulation and animal and vital functions consequent thereon, such as respiration, pulsation, etc."[9] Thus, in practice, only a physician may determine that the state of death exists.

For nearly a decade, a number of legislative attempts have been made to clarify the definition of death and/or medical practices associated with its occurrence. At the time of this writing, for example, there is a bill pending before the 1979 Missouri Legislature (substitute House Bill 438) that states, "For all legal purposes, physicians and surgeons licensed by Chapter 334 RS-MO and any person acting pursuant to the orders of such a physician and surgeon shall not be required to continue or to maintain extraordinary or heroic life support measures on any person determined to have total and irreversible cessation of all brain function." This bill does not clarify or redefine death. It is not addressed to the "no code blue" issue, but it does address medical practice in a single, unique set of circumstances. Because death is yet to be defined in a legislative sense, there can be no statute which requires that all patients must undergo cardiopulmonary resuscitation at their demise.

The question then arises, "Why do we have 'No Code Blue' orders?" It would appear that we are experiencing the pendulum effect so often seen in many aspects of medical practice. In the early 1960s, it was recognized that if cardiopulmonary

Aware of the publicity given to the medical practice of limiting extraordinary care, the authors have explored the literature and have engaged in indepth departmental discussions regarding the principles involved. They recommend that now is the time for physicians "to stop the pendulum's movement to the extreme at which the medical decision regarding extraordinary care becomes a social or legal issue."

Dr. Lampton is Assistant Professor of Medicine and Dr. Winship is Professor of Medicine, University of Missouri-Columbia School of Medicine.

resuscitation (CPR) were immediately instituted by a physician in cases of sudden and unexpected cardiopulmonary arrest, as in the case of the 30-year-old man after bilateral herniorrhaphies, the patient would likely recover with little or no brain dysfunction or other injury.

As more and more physicians vigorously applied these techniques, the need for a specialized care unit to care for the post-CPR patients and those in danger of cardiac arrest was recognized. Thus, the Coronary Care Units (CCU) were born. The discussions soon centered on who could institute CPR. We began to see training courses for CCU nurses and the use of "standing orders" to permit CPR and even defibrillation prior to a physician's arrival at the emergency scene.

In an effort to save even more lives, CPR courses have been made almost mandatory for all nurses and for all supervisory personnel outside of nursing service in some institutions. In an attempt to fully implement these lifesaving programs and, in effect, to "cover the nurses," many medical staffs adopted universal, hospital-wide policies stating that CPR would be instituted on all patients experiencing sudden and unexpected cardiopulmonary arrest. Thus, a community-wide medical practice was established.

"Code Blue Teams" were established to bring essential technology and manpower to the bedside. Concomitant with this pendulum swing has been an explosion in the technology and knowledge in the fields of nephrology, cardiology, respirology and oncology that has altered or prolonged the course of previously rapidly fatal diseases. Philosophers, theologians, nurses and allied health professionals joined physicians in the discussions regarding which patients would benefit most from the available technology. Simultaneously, allied health personnel such as respiratory therapists and clinical pharmacists, who are relatively recent newcomers in the health practice field, have developed a great deal of expertise in these technology-intense areas and have become involved in the "Code Blue" process.

Ultimately, at full swing of the pendulum, it appears that many persons view CPR as a mandatory activity for all patients dying in a hospital. Thus, physicians find themselves in a paradoxical position of having to write a negative, inhibiting type of order to protect the best interests of their patients who have a disease process in which the natural course is an expected demise. Our discussions with legal counsels of hospitals and professional groups suggest that if CPR for one and all is considered the standard of practice, then a "No Code Blue" order *may not* be binding on the emergency physician and nurse who are at the patient's bedside in our absence. Thus, such an order would be a nonsequitur.

Finding ourselves in this confusing position, it seems appropriate to examine the medical decision-making process not only in regard to the Code Blue process but, also, to the larger issue of limiting extraordinary care. First, by establishing the physician-patient relationship, we have an unwritten contract with the patient to exercise our best medical judgement to make a diagnosis, to establish therapy and to minimize suffering in his best interests. In essence, that contract is between only two individuals, the physician and his client, the patient. The client makes two major concessions: first, the physician is the one with the most knowledge (or the ability to attain it) upon which to base medical decisions; second, the patient trusts the physician to make, at times, very difficult decisions in his best interests whether he, as a patient, is competent or not. This does not prevent the physician from discussing the medical problems of his client with the family, but it does preclude the family from actually making any medical decisions since the patient has delegated this responsibility to the physician.

In what context does the physician make a decision to limit extraordinary care? There are two subsets of patients who might have need of extraordinary care: (1) the patient with a disease, the course of which is one of curability, and who experiences a sudden, unexpected complication from which there is a reasonable expectation of recovery and (2) the patient with a terminal illness. Having a terminal illness connotes that there is a process that leads inexorably at either a fast or slow pace to the patient's death. It does not mean that this patient is any different from the rest of us. This patient has the same rights as everyone else. The only difference is that his life span is predictably shorter than that of most persons. It does not mean, as some people have interpreted the "no code blue" order to mean, that this patient is any less deserving of excellent medical care. They will always have the contract with their physician to minimize suffering.

Once we find ourselves in the setting of a patient with a terminal illness, we need to exercise wisdom and judgement to protect our patients' best interests before all others. We must weigh a number of factors, make a sound decision and then adequately communicate our decision to our colleagues and nursing and allied health staffs. In order to carry out this charge, one should review the medical factors, assess if what we are doing reasonably prolongs life with a minimum of suffering and if other approaches are warranted. Once that is decided, we can consider secondary factors such as the patient's own life priorities, e.g., "I wish to live to see my son married."

Next, one can consider social factors such as the patient's age, his familial obligations, his occupation, his religious beliefs and others. Last, we should consider other factors but only as they relate to our patient's best interests, such as legal implications of untried therapies, economic impact of extraordinary care without hope of altering an inexorable course, research implications of new therapies for societies at large and others. Ultimately, we must be sure that our own social and religious values are not causing conflicts.

Once our decision is made to limit extraordinary care, we should follow the recommendations of the AMA[10] to clearly and concisely write in the progress notes our reasons for making the decision. This notation should clearly define that in the attending physician's opinion, his patient is inexorably and terminally ill with a given disease process(es). The note should clarify any extenuating factors that have been considered. For example, it is appropriate to document the family's request that "everything be done" and the discussions with them concerning the inadvisability of extraordinary care. Finally, for the case at hand, the note should clearly and specifically define the working definition of extraordinary care, such as no additional transfusions, no dialysis, no mechanically assisted ventilation or no CPR at the time of the patient's demise.

We believe that the order should be positive, prescribing a specific activity as opposed to a negative inhibitory one. Such a positive statement could read, "In the event of a patient emergency in my absence, take note of my opinion regarding extraordinary care in the progress note." It is possible, indeed, to abbreviate this order. However, this is the most significant order in the chart and must be precisely clear.

In conclusion, the time has arrived when we as physicians need to exercise clarity of thought, conscientious discussion with our colleagues and wisdom in judgement to stop the pendulum's movement to the extreme at which the medical decision regarding extraordinary care becomes a social or legal issue. By codifying and reclarifying this medical practice in our hospital staff bylaws, we can make it clear that physicians are well motivated and equipped to make these medical decisions reasonably and correctly. To paraphrase a famous Missourian, "The buck stops here!"

References

1. Curran, W. J.: The Saikewicz Decision. N. Engl. J. Med. 298:499-500, 1978.
2. Schram, R. B., Kane, J. C. and Roble, D. T.: Law-Medicine Notes — "No Code" Orders: Clarification in the Aftermath of Saikewicz. N. Engl. J. Med. 299:875-878, 1978.
3. Glantz, L. H. and Swazey, J. P.: Decisions Not to Treat: The Saikewicz Case and Its Aftermath. Forum on Medicine 2:22-31, 1979.
4. In Short: A Right to Die. Newsweek, p. 21, Sept. 13, 1976.
5. In Short: A Right to Die. The National Observer, p. 6, Oct. 9, 1976.
6. The "No Code Blue" Issue and Patients' Rights. ABC's "Good Morning America" program, Feb. 5, 1979.
7. In the Matter of Shirley Dinnerstein. 380 NE 2nd. 134 (Massachusetts Appeals Court, 1978).
8. California Health and Safety Code, Section 7185-7195.
9. Schmitt vs. Pearce. 344 SW2 P120 Missouri Supreme Court.
10. National Conference on Standards for Cardiopulmonary Resuscitation and Emergency Cardiac Care. JAMA 227(suppl.):833-868, 1974.

In comments submitted to HEW Under Secretary Hale Champion, the AMA said that the Administration's tentative proposal for a national health play would federalize the health care delivery system and "ultimately lead to a rationing of care and a general lowering of the quality of care available to all citizens of this country." The AMA said the private sector can meet the needs of providing insurance, with government support to finance coverage for poor and high-risk individuals.

J. NED SMITH, M.D., *Columbia*

Update: Irritable Bowel Syndrome

IF THE IRRITABLE BOWEL SYNDROME is a leading contender for the most common problem coming to a physician's attention in developed countries, it seems appropriate to review it periodically. Almy states that it ranks almost equally with the common cold as a cause of industrial absenteeism due to illness.[1] Kirsner stated that estimates of functional gastrointestinal disorders approximates 50% to 60% of our patients with digestive symptoms.[2]

The irritable bowel syndrome refers to a disorder in the function of the intestines in the absence of organic disease. However, there is evidence that the patients may have a disturbance in intestinal motility[3] (see pathophysiology). The manifestations will be discussed in detail. In general, however, the two main divisions are patients with the spastic colon with constipation, or alternate constipation and diarrhea and a smaller number of patients with painless diarrhea.

A number of other names have been used for the syndrome, but they often imply other disorders. Colitis or mucous colitis imply an inflammation that is not a part of the syndrome. Functional enterocolonopathy indicates a disorder involving the small and large bowel. Psychophysiologic gastrointestinal reaction is a bit awkward; it implies a generalized disorder of the gastrointestinal tract associated with emotional lability. The irritable bowel syndrome is often underdiagnosed. It tends to be replaced with diagnostic terms such as chronic gastritis, cholecystitis, pancreatitis or diverticulitis. Patients likewise have difficulty accepting the impression that their distress and suffering are not likely the result of an inflamed organ.

Chaudhary and Truelove reviewed 130 cases of the irritable colon syndrome and found twice as many in women as in men. Most patients have their first symptoms as young adults or in middle age.[4] A significant point in their survey is the fact that men do not tend to develop such symptoms for the first time after 50 years of age. Women may have more symptoms during the week before menstruation and also during menopause.

NORMAL PHYSIOLOGY OF THE COLON

The major function of the colon is to prepare the waste products in a convenient form for elimination. The colon is physiologically divided into two separate units: the right colon is adapted for absorption and reduction of the bulk of excreta and the left colon for the storage of feces and their expulsion.

Absorption and excretion. The healthy colon probably absorbs only about 1 liter of water a day; this compares with about 8 liters absorbed in the small bowel. The colon also absorbs sodium chloride and glucose and excretes potassium and bicarbonate. The excretion of potassium from the colon can be a contributing factor to the development of hypokalemia associated with diarrhea.

Colonic movement. Several types of colonic movement have been described and each seems to have its own function (Greenberger and Winship, 1976).[5] A historical review of our knowledge of colonic motility also has recently been made by Christiansen.[6] Haustral shuttling is caused by annular contractions of short segments, especially of circular muscles, which are not progressive. These contractions cause colon contents to move back and forth in a kneading action but do not result in net movement of the contents; they are inhibited by food intake. Segmental propulsive movements consist of contractions of more than one haustrum. This type of contraction displaces colon contents in both directions, but the overall net propulsion is toward the rectum. Systolic multihaustral propulsion is effected by contractions which are similar to but more extensive than those just mentioned and involve several haustral segments. These contractions move the fecal mass distally. Peristalsis also occurs in the colon. It is described as a contraction wave moving down the colon at 1 to 2 cm/min and preceded by muscle relaxation. Contraction is said to be sustained behind the tail of the fecal mass and net movement of the colon contents does occur. These latter three types of colon movements are stimulated by eating in contradistinction to haustral shuttling motion.

Intraluminal pressures are very poorly correlated with movement of colonic contents. Four types of pressure patterns have been observed from intraluminal pressure measurements. Type I waves are isolated, spontaneous monophasic waves of small amplitude; their function is unknown. Type II waves are similar in form to type I but are greater in amplitude (approximately 10 mm Hg) and are of somewhat longer duration. These seem to correspond to the haustral shuttling movements of the colon. Type III waves are frequently observed elevations of the baseline pressure superimposed upon which are seen type I and II waves. The function of type III waves is not clear. Type IV waves are peristaltic waves which are infrequently observed.

PATHOPHYSIOLOGY

Almy has repeatedly demonstrated increased motility of the sigmoid colon in normal and irritable bowel patients under stress. He also has demonstrated decreased motility of the rectum associated with feelings of hopelessness and crying (Almy, 1951).[7] The motility of the large bowel can be increased with morphine, parenteral prostigmine after eating[8] and after parenteral cholecystokinin. Also, the basal electrical rhythm (BER) of the smooth muscle cells has been studied. The BER of the normal colon is of two types: a faster rhythm of four to nine cycles per minute and a slower rhythm of 2.5 to 4 cycles per minute. Snape *et al*, 1976, have shown that the irritable bowel patients have a greater number of slow cycle activity or about 40% of the total activity compared to a normal 10%. The implication is that the irritable bowel patients are constitutionally different than normal.[9]

The pain in the irritable bowel syndrome is secondary to spasm, distention of the bowel wall or unusual sensitivity of the bowel but not to excessive or abnormal gas. Thus, the amount of gas is normal, but its distribution and the patient's reaction to it may be exaggerated.

CLINICAL MANIFESTATIONS

Spastic colon. The most common expression of the irritable bowel is pain in the left lower quadrant of the abdomen associated with constipation or alternate constipation and diarrhea. There is exaggeration of the segmental, drying activity of the colon, which is often called the spastic colon. The patients note that the stools are ribbon-like or pencil-like or that the stools are in hard, dry balls. The patients also tend to have frequent tension headaches and a sense of fatigue. It is likely that the sigmoid colon is palpable and somewhat tender on physical examination. The proctoscopic examination usually is normal except for prominent spasm and tenderness in the sigmoid area. These patients also may have low back pain. A number of subtypes of the spastic colon have been described.

Splenic flexure syndrome. Distress may be well localized to the left upper quadrant and is called the splenic flexure syndrome when excess gas is seen in the splenic flexure with a plain film of the abdomen. I consider this as a variant of the irritable bowel, although others consider it as a separate entity. In the absence of a palpable spleen or other mass, pain and tenderness just below the left coastal margin are very likely bowel pain. The same patient may have chest wall pain and hyperventilation and believe that he has pain secondary to heart disease.[10]

Hepatic flexure syndrome. Pain may be localized in the area of the hepatic flexure (hepatic flexure syndrome). This pain, plus associated bloating and intolerance to many foods, often mistakenly leads to an impression of gallbladder disease.

Cecal gas syndrome. Finally, tenderness may be localized to the cecal area (cecal gas syndrome). In these patients, the tenderness does not seem severe, but it is more constant and may persist for weeks or months.

Painless diarrhea. The irritable bowel may be manifest by painless diarrhea. It tends to cluster in the morning.

The diagnosis of irritable bowel syndrome is not made in the presence of anemia, electrolyte imbalance or continuing weight loss. Only a tentative diagnosis is made when the sedimentation rate is elevated.

The irritable bowel syndrome continues to be one of the most common disorders in medicine. A constitutional abnormality in the motility of the bowel of patients with this syndrome has been suggested only recently. The author describes the numerous manifestations of the syndrome, lists important evidence against its diagnosis and discusses treatment. He places emphasis on the importance of the patient's history or the "interview" in understanding the patient and determining therapy. Dr. Smith is Associate Professor of Medicine, University of Missouri-Columbia School of Medicine.

Differential diagnosis. The differential diagnosis can include many of the diseases of medicine and surgery. The most difficult disorder to differentiate is carcinoma of the body or tail of the pancreas before symptoms of weight loss, back pain, and jaundice occur. These patients often have vague gastrointestinal distress and depression as early symptoms.

INFORMATION AGAINST IRRITABLE BOWEL

The following information is not in keeping with the irritable bowel syndrome:

1. anemia, rectal bleeding or positive hemocult test
2. markedly increased sedimentation rate
3. electrolyte abnormalities
4. weight loss
5. incontinence
6. nocturnal diarrhea
7. oil floating on stool water
8. symptoms first developing over age 50

TREATMENT

In the last few years, therapy has been initiated by the interview, examination and reassurance plus a program to increase bulk in the diet. The examination may be only a simple physical examination when the patient is a youth or may require hospitalization and a very complete workup in some situations when the patient is middle aged or elderly. Reassurance from a normal examination contributes to the therapy, but it is not sufficient in itself.

Interview. The importance of the interview is brought out by Almy.[11] The patient who consults a physician or institution for the relief of a bodily complaint is issuing a personal call for help. "This call for help can be effectively met with a personal response by the physician whose capacity for help is then strengthened."

Diet. The use of increased bulk in the diet for the irritable bowel and for diverticular disease[12] is now common. The variation in the specific advice makes one wonder whether credit attributed to bulk should be applied more to the interview. Nevertheless, for the present time, the consensus is that the increased bulk often helps the patient. At the American College of Physicians meeting in Boston, 1978, it was suggested that two slices of brown bread per day satisfies the need for increased bulk. Other advice has been to increase bulk with three cooked fruits and vegetables per day, the use of psyllium seed, the use of bran as found in commercial cereals, the use of unprocessed bran (up to four tablespoons daily) or the use of 12-18 gm bran tablets per day.[12] I have stressed a normal diet with emphasis on adequate fruits and vegetables, usually with the addition of hydrophyllic psyllium seed (Metamucil), one teaspoon to three tablespoons daily. When using bran, I usually suggest a daily serving of All Bran® topped with seasonal fresh fruit.

MEDICATIONS

Emotional lability is common. For example, Fielding estimates that stress is the precipitating factor or cause of exacerbation in four out of five patients.[13] For anxiety, chlordiazepoxide (Librium) 5-10 mg b.i.d. or 25 mg h.s. or diazepam (Valium) 2.5-5 mg b.i.d. are still frequently used.[14] Decrease in caffeine and increased exercise, when possible, should accompany treatment for anxiety. Depression has been stressed by Hislop[15] and also by Young *et al.*[16] (Hislop noted that 49 of 60 patients [41 women] were depressed and 15 [13 women] were considered suicidal. Eighty percent were helped with amitriptyline [Elavil]. In the study by Young *et al*, 13 of 29 patients had a history of depression.)

Use of anticholinergic medication is of theoretical benefit in decreasing spasm in the spastic colon. Tincture of belladonna has the advantage of adjustment of dosage. I have found occasional benefit with hexocyclium methylsulfate (Tral Gradumet) 50-75 in the AM and 4:00 PM or an hour or so before symptoms usually occur. This applies to patients with morning diarrhea or diarrhea after supper in addition to the spastic colon. Codeine (15 mg) taken the first thing in the morning has occasionally been used for morning diarrhea (not constipation) by more than a generation of gastroenterologists.

BIBLIOGRAPHY

1. Almy, T. P.: The Irritable Bowel Syndrome, in Gastrointestinal Disease. Edited by Sleisinger, M. H. and Fordtran, J. S. W. B. Saunders Company, 1978, p.1585.

2. Kirsner, J. B.: Clinical Challenge of Functional Gastrointestinal Disorders. Post Grad. Med. 39:565, 1966.

3. Drossman, D. A.: Diagnosis of the Irritable Bowel Syndrome. Ann. Int Med. 90:431, 1979.

4. Chaudhary, N. A., and Truelove, S. C.: The Irritable Colon Syndrome. A Study of the Clinical Features, Predisposing Causes, and Prognosis in 130 Cases. Quart. J. Med. 31:307, 1962.

5. Greenberger, N. J. and Winship, D. H.: Gastrointestinal Disorders, Yearbook Medicine Publishers, 1976, The Colon, 178-181.

6. Christiansen, J.: Colonic Motility, in Gastrointestinal Motility in Health and Disease. Edited by Duthie, H. L. Baltimore, University Park Press, 1978, p.367.

7. Almy, T. P.: Experimental Studies on the Irritable Colon, Amer. J. Med. 10:60, 1951.

8. Snape, W. H., Matarazzo, S. A. and Cohen, S.: Effect of Eating and Gastrointestinal Hormones on Human Colonic Myoelectric and Motor Activity. Gastroenterology 75:373, 1978.

9. Snape, W. J., Carlson, G. M., Cohen, S.: Colonic Myoelectric Activity in the Irritable Bowel Syndrome. Gastroenterology 70:326, 1976.

10. Dworken, H. J., Fructuoso, J. B. and Machella, T. E.

(Continued on page 269)

JAMES D. MALTBY, M.D., *Columbia*

Radiographic Manifestations of Pulmonary Aspergillosis

A Review of Four Cases

Aspergillosis is a mycotic disease caused by species Aspergillus. The more than 200 species of Aspergillus, of which Aspergillus fumigatus is the most common in man, is normally a human upper respiratory tract saprophyte and is often a laboratory contaminant. Aspergillus infection in the chest, though not common, produces varied and often fairly definite patterns on the chest film which tend to occur in specific clinical situations. Four cases of pleuropulmonary aspergillosis from the University of Missouri Medical Center at Columbia are reviewed. They span the principal categories of the disease and serve as a review of their principal radiographic and clinical manifestations.

Probably the most accepted classification of aspergillosis is that proposed by Hinson *et al* in 1952.[8] They divide the disease into four distinct groups: (1) secondary invasive, (2) secondary non-invasive, (3) primary invasive and (4) allergic. It should be pointed out that primary or secondary do not refer to initial or reinfection disease as in tuberculosis and histoplasmosis but refer to infection in an otherwise normal host or infection secondary to a preexisting host disease.

Case Reports

Case #1 A 63-year-old woman was admitted to the hospital with fever, chills and night sweats. Four months prior to her admission, her diagnosis after a bone marrow biopsy and clinical workup was a stage

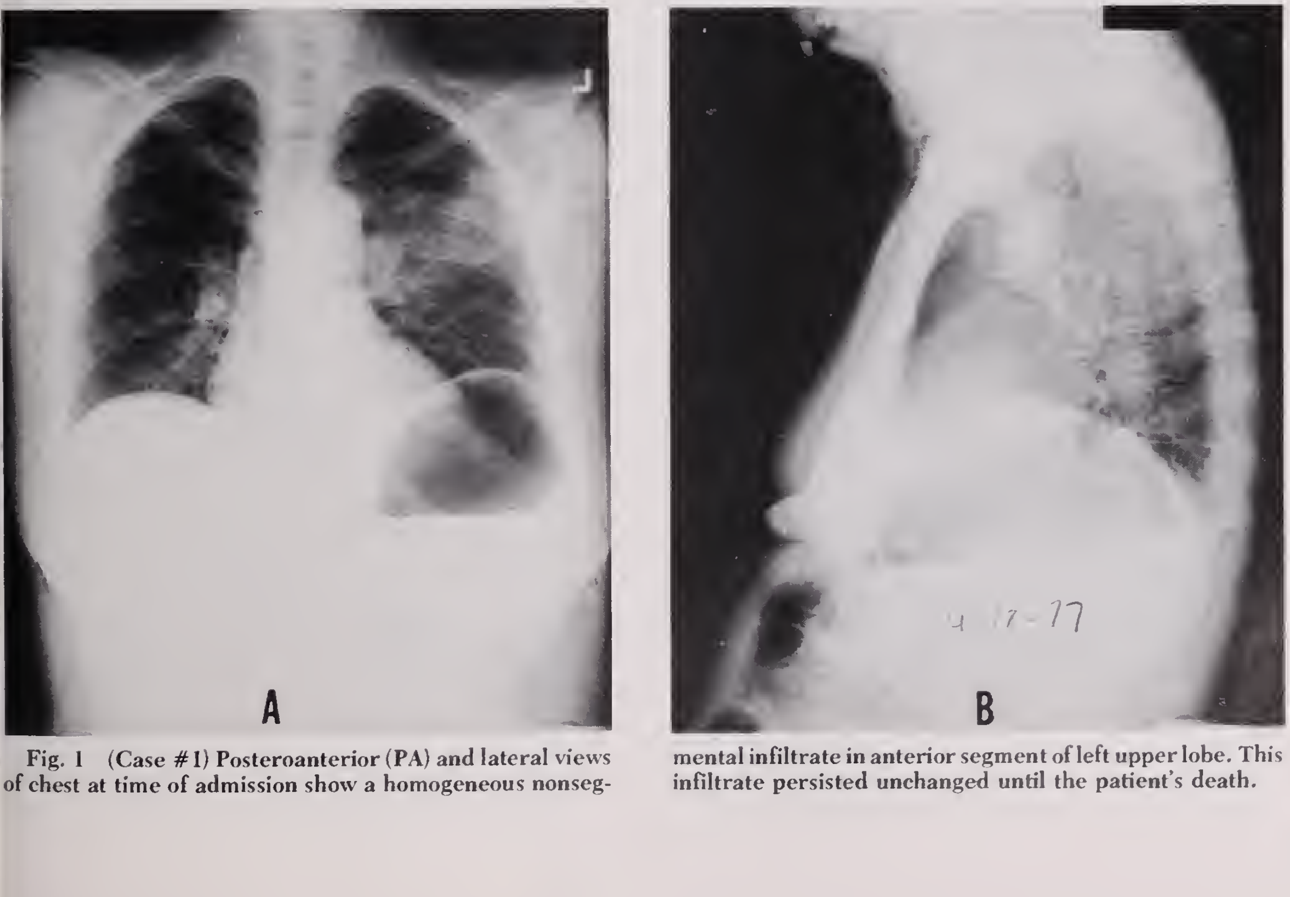


Fig. 1 (Case #1) Posteroanterior (PA) and lateral views of chest at time of admission show a homogeneous nonsegmental infiltrate in anterior segment of left upper lobe. This infiltrate persisted unchanged until the patient's death.

IV-A well differentiated lymphocytic lymphoma. She was treated with 2 mg of vincristine weekly and 60 mg of prednisone daily with no observable response. Two weeks prior to admission, the patient had an onset of fever to 105C with chills, nausea and vomiting. She was treated elsewhere with antibiotics with no response.

Chest films showed a relatively homogeneous, nonsegmental infiltrate in the anterior region of the left upper lobe (Fig. 1). White blood cell count was 1,200 with a normal differential. Bacterial cultures were negative and there was no response to ten days of antibiotic therapy. A repeat bone marrow biopsy specimen showed no change since the biopsy performed four months previously.

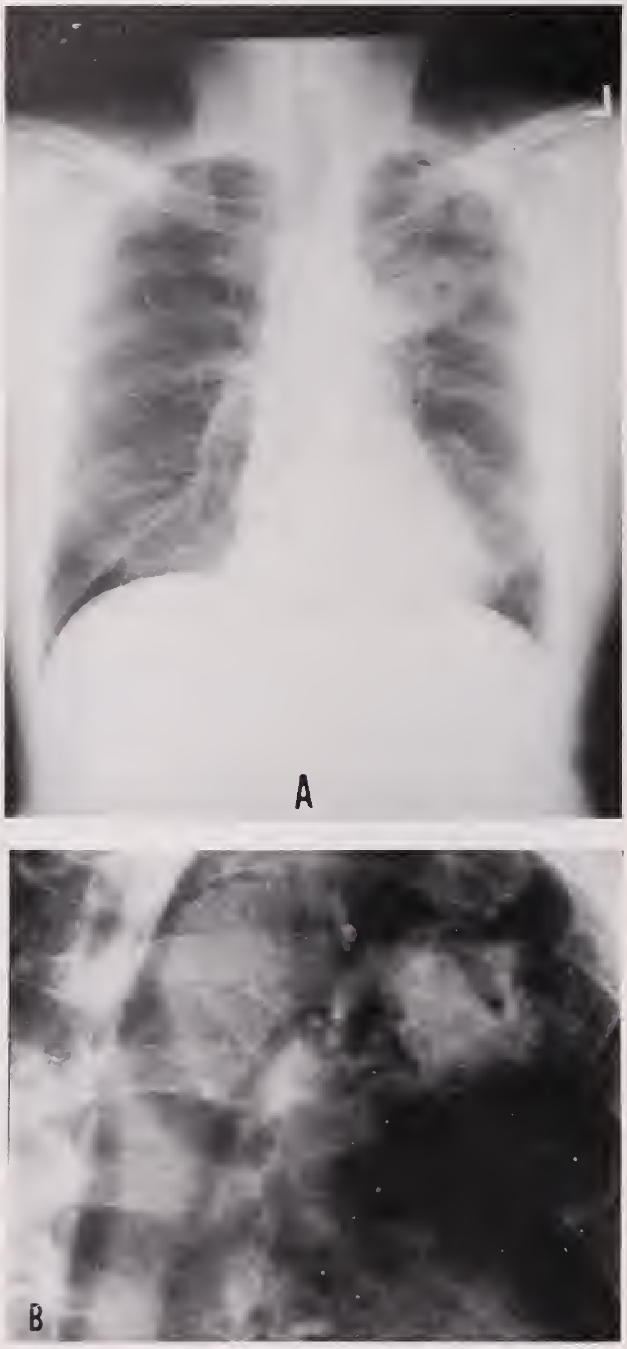


Fig. 2 (Case #2) PA view *(A)* shows an irregularly marginated mass in left upper lobe with an area of central lucency. A bucky oblique *(B)* shows a cystic structure with its cavity almost filled with a rounded density, producing a crescent of air at the superior margin of the cyst.

An open lung biopsy was performed and yielded invasive aspergillosis. The neutropenia, fever and roentgenographic infiltrate persisted in spite of amphotericin-B therapy. The patient died suddenly three weeks after admission.

Case #2 A 56-year-old white man was admitted to the hospital for evaluation of hypertension. An initial chest film showed a mass in the left upper lobe with a crescentric radiolucency (Fig. 2). The patient was a nonsmoker and had no prior history of lung disease. No prior films were available. A purified protein derivative (PPD) skin test was negative. A bronchoscopy yielded no information. A left upper lobectomy showed a 3.5 cm cystic cavity connecting to an anterior segmental bronchus of the left upper lobe. The cyst wall was about 2 mm thick and there was minimal adjacent chronic inflammatory infiltrate. The cyst contained a mass of intertwining dichotomous branching fungal elements. No infiltration of the fungi outside the cavity was seen. No acid-fast bacilli were present. Microscopic sections showed the wall of the cyst lined with columnar respiratory epithelium and fragments of squamous metaplasia.

Case #3 A 55-year-old white man entered the hospital complaining of fatigability, weight loss and hemoptysis. Ten years prior to admission, he had a left upper lobe lobectomy for an aspergilloma. Two years later, his sputum was found to be positive for acid-fast bacilli. He was treated with isonicotine acid hydrazide (INH) and ethambutol which has been continued to the present. He has been hospitalized for hemoptysis five times in the last three years. During these admissions, his sputum was positive for aspergillus and negative for acid-fast bacilli. For the past year, he has had daily morning hemoptysis of a few clots and afternoon low grade fever and night sweats.

A physical examination showed a chronically ill-appearing man with a left thoracotomy scar and decreased expansion on the left side. Sputum and bronchial washings showed Aspergillus fumigatus. A review of chest films back to 1969 showed a growing cavity in the left chest which, by 1977, had replaced all but a small portion of the lung. All films showed consolidation of the lung adjacent to the cavity with multiple small areas of radiolucency representing necrosis (Fig. 3).

Six weeks after admission, the patient had a left pneumonectomy. A 3 cm fistula was seen from the medial basilar bronchus to the pleural space. A mycotic abscess was present in the remaining left lower lobe with tissue invasion. Pleura and lung showed mycelial growth of aspergillus.

Eight days postoperatively, the patient became highly febrile and had positive blood cultures for aspergillus. A Claggett window was created to aid drainage. For the next month, the patient's left pleural

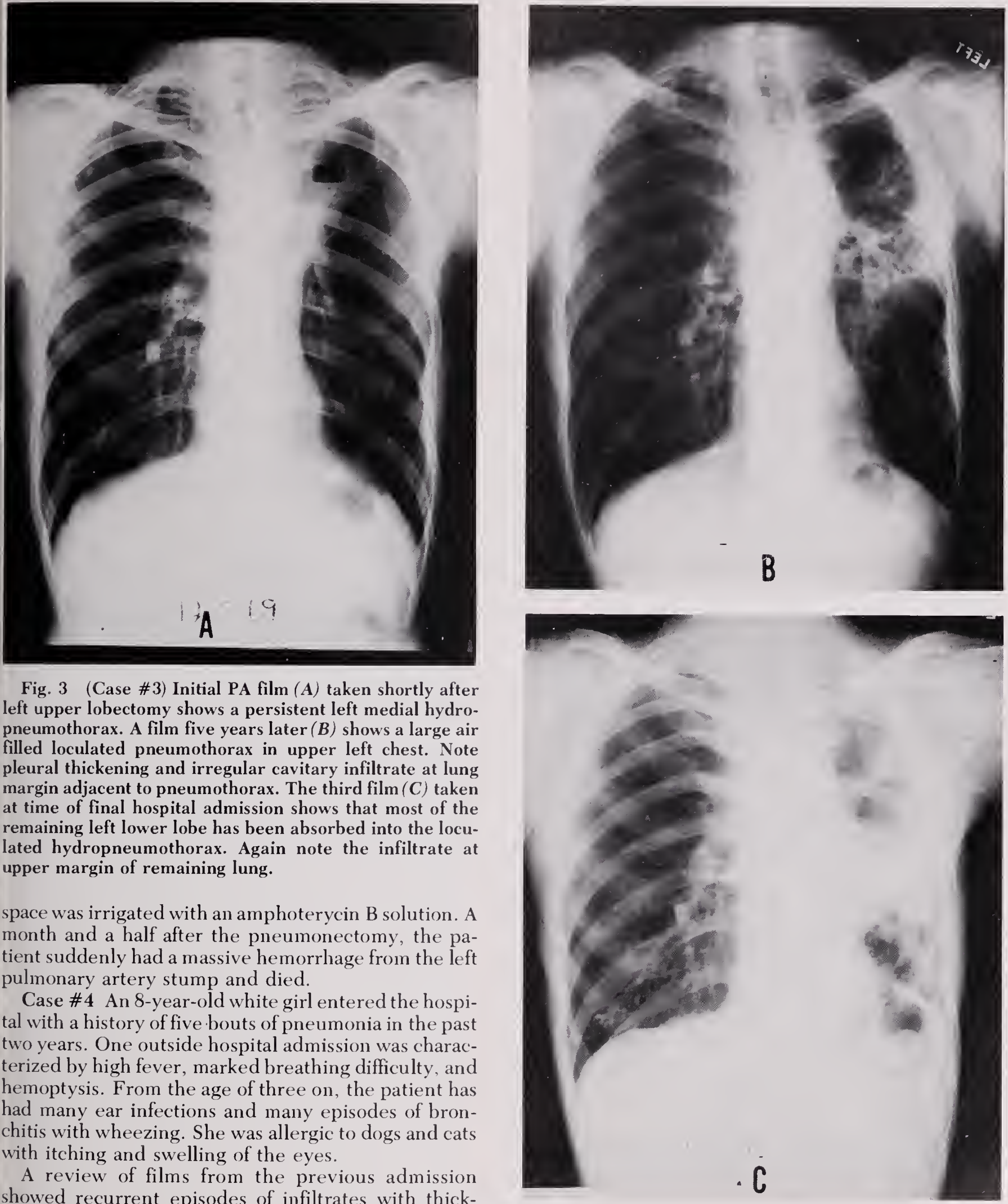


Fig. 3 (Case #3) Initial PA film *(A)* taken shortly after left upper lobectomy shows a persistent left medial hydropneumothorax. A film five years later *(B)* shows a large air filled loculated pneumothorax in upper left chest. Note pleural thickening and irregular cavitary infiltrate at lung margin adjacent to pneumothorax. The third film *(C)* taken at time of final hospital admission shows that most of the remaining left lower lobe has been absorbed into the loculated hydropneumothorax. Again note the infiltrate at upper margin of remaining lung.

space was irrigated with an amphoterycin B solution. A month and a half after the pneumonectomy, the patient suddenly had a massive hemorrhage from the left pulmonary artery stump and died.

Case #4 An 8-year-old white girl entered the hospital with a history of five bouts of pneumonia in the past two years. One outside hospital admission was characterized by high fever, marked breathing difficulty, and hemoptysis. From the age of three on, the patient has had many ear infections and many episodes of bronchitis with wheezing. She was allergic to dogs and cats with itching and swelling of the eyes.

A review of films from the previous admission showed recurrent episodes of infiltrates with thickened dilated proximal bronchi and alternating patches of peripheral pneumonia and segmental atelectasis (Fig. 4). The film from the present admission was clear, and the patient was asymptomatic. A nasal smear showed 55% eosinophils, and blood eosinophilia was 16%. Results of skin testing were markedly positive for aspergillus as well as ragweed pollens.

Discussion

Secondary invasive aspergillosis, as illustrated by Case #1, has been seen in increasing numbers in the past 20 years as a result of immunosuppressive therapy for malignant disease or organ transplants. Of 98 patients seen with this disorder

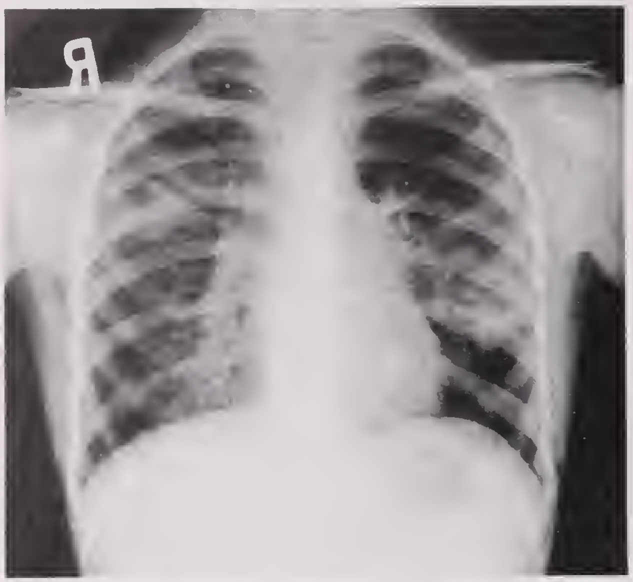


Fig. 4 (Case #4) A PA view taken during patient's most severe bout of "pneumonia" shows typical dilated mucoid impacted proximal bronchi with one or two areas of peripheral segmental atelectasis.

at the NIH, 86% had lymphoreticular or hematopoetic malignancies.[1] Not one patient in this series showed a positive blood culture, and most were not diagnosed prior to death because of difficulty in obtaining tissue for culture and microscopic demonstration of the hyphae. Sputum evaluation was difficult because of the saprophytic nature of the organism and its frequency as a laboratory contaminant. Other involved organs were the gastrointestinal tract, brain, liver and kidney, thyroid and heart in order of frequency.

The common manifestation of secondary invasive aspergillosis is that of a slowly progressive necrotizing bronchopneumonia, often insidious in onset. Thirty-two percent of the NIH cases showed hemorrhagic pulmonary infarctions with vascular invasion by hyphae at postmorten examination. Only 16% showed cavitation.[1] Miliary spread of aspergillus infection is rare.[2] The radiographic findings are usually nonsegmental consolidation in the lung, which may be single or multiple and which progress slowly and do not respond to the usual antibiotics.

The secondary noninvasive form of aspergillosis is that of the mycetoma or "fungus ball" as seen in Case #2. These mycetomas establish themselves in prior, often inactive lesions in the lungs. They are seen in bronchial cysts, tuberculous cavities, lung abscesses, bronchiectasis and pneumoconiosis, usually with no adjacent tissue reaction and no host response.[3] The characteristic appearance is that of a thin-walled cavity partially filled with a fungus ball which is often mobile on changing positions of the patient. Hemoptysis is common in reported cases in the literature (around 60%) and may often be severe enough to warrant surgical resection. Occasionally, organisms can be obtained for culture by fluoroscopically guided bronchial brush biopsies.[3] In Case #2 with an absence of other demonstrable disease, with a negative PPD and with demonstration of a lining of respiratory epithelium around the cavity, the mycetoma may well have arisen from a bronchial cyst.

True primary invasive aspergillosis is very rare and occurs as a result of massive innoculum in the host. Birds, grains, animal skins and heavy dust exposure have been implicated, but most reported cases have no definite specific occupational exposure.[2] The cases described in the literature are similar to secondary invasive aspergillosis with slowly progressive nonsegmental consolidation, which may disseminate on occasion to other organs.

The progressive invasion and destruction of the left lower lobe in Case #3 is, in essence, a form of primary invasive aspergillosis with the innoculum in this case being an infected pleural cavity. In 1978, Meredith *et al* described two cases of pleural aspergillosis, one of which was a complication of a preexisting empyema and the other was secondary to seeding of the pleura by rupture of a preexisting aspergilloma cavity.[4] In the literature, predisposing causes are listed as tuberculosis, bronchopleural fistulas, pleural intubation and drainage, and lung resections. Pleural infection by aspergillus is most commonly seen in established empyemas and bronchopleural fistulas. Treatment is nystatin and amphotericin-B administered parenterally and intrapleurally often over several months.

Krakowka *et al* described ten cases of pleural aspergillosis from Warsaw.[5] Most of their cases occurred also as a complication of empyema and bronchopleural fistula. However, three of their cases occurred as a complication of lung resection for mycetoma. In six of ten cases, sterilization of the pleura was obtained by intrapleural nystatin. Case #3 in this series certainly illustrates the potential pathogenicity of Aspergillus fumigatus and the importance of early diagnosis and vigorous therapy of pleural infection by the organism.

Allergic or hypersensitivity aspergillosis, as illustrated by Case #4, is the result of an overreaction of the host to the relatively innocuous threat normally posed by noninvasive aspergillus. Eighty percent to 90% of cases reported in the literature have peripheral eosinophilia, and most have a history of hypersensitivity often with an adult onset of asthma. The reaction is probably an Arthus phenomenon from an anaphylactoid hypersensitivity associated with nonprecipitating antibodies. It is associated with high serum precipitins in more than 60% of the cases and should be suspected with a positive skin reaction to aspergillus antigen. Steroid therapy produces a dramatic response, and antifungicidal agents are contraindicated.[3] In many respects, hypersensitivity aspergillosis is one of the PIE (pulmonary infiltrates with eosinophilia) group of diseases with a specific identifiable antigen.

The clinical picture of hypersensitivity aspergillosis consists of recurrent febrile episodes with cough, wheezing and purulent sputum often containing aspergillus plugs, Charcot-Leyden crystals and eosinophils.[1] Pathologically, the proximal bronchi become filled with a thick mucoid material with or without peripheral atelectasis. The lack of peripheral atelectasis, which is often seen, is believed to be due to collateral air drift through the pores of Kohn. The radiographic picture is fairly unique and consists classically of grape-like, peri-hilar densities, sometimes described as a "gloved hand" appearance, which represent the dilated mucoid impacted proximal bronchial tree. Proximal cystic bronchiectasis is produced and can be demonstrated bronchographically.[6] The picture is fairly specific with a classic radiographic presentation in the appropriate clinical setting of asthma and eosinophilia.

One condition which can mimic hypersensitivity aspergillosis on the chest film is that of a bronchial mucocoele, which is usually secondary to a congenitally atretic bronchus but is occasionally produced by postinflammatory stricture of a bronchus or an occasional obstructive neoplasm. The clinical setting for bronchial mucocoele is not that of hypersensitivity and 17 of 21 cases reported in the literature are in patients under 25 years of age. Radiographically, bronchial mucocoele is characterized by a focal hyperinflation distal to the mucoid collection in the bronchus probably secondary to focal obstructive emphysema. The mechanism of this hyperinflation is not entirely understood, but it may be due to increased collateral air drift during inspiration or possibly to a fundamental weakness of the bronchial cartilage which allows air trapping in the adjacent bronchi.[7]

Aspergillosis is a mycotic disease caused by species of Aspergillus. Of the more than 200 species of aspergillus, aspergillus fumigatus is the most common in man, is normally a human upper respiratory tract saprophyte and is often a laboratory contaminant. The report of four cases of pleuropulmonary aspergillosis span the principal categories of the disease and serve as a review of their principal radiographic and clinical manifestations.

Dr. Maltby is Associate Professor of Radiology, Department of Radiology, University of Missouri-Columbia Medical Center.

SUMMARY

Four cases of pulmonary aspergillosis which illustrate the spectrum of the disease in human beings have been presented. Though aspergillus is rare as pathogen in human beings, its radiographic patterns are often characteristic in the appropriate clinical setting. Early, correct diagnosis of these conditions should be made and the appropriate therapy instituted.

REFERENCES

1. Young, R. C., Bennett, J. E., Vogel, C. L., Carbone, P. P. and DeVita, V. T.: Aspergillosis. Med. 49:147-173, 1970.

2. Fraser, R. G. and Paré, J. A. P.: Diagnosis of Diseases of the Chest, Second Edition. Philadelphia: W. B. Saunders Co. 1978. pp. 806-812.

3. Zimmerman, R. A. and Miller, W. T.: Pulmonary Aspergillosis. Am. J. Roent. 109:505-515, 1970.

4. Meredith, H. C., Cogan, B. M. and McLaulin, B.: Pleural Aspergillosis. Am. J. Roent. 130:164-166, 1978.

5. Krakowka, P., Rowinska, E. and Halweg, H.: Infection of the Pleura by Aspergillus fumigatus. Thorax 25:245-253, 1970.

6. Madewell, J. E., Montgomery, J. L. and Cavanaugh, R. C.: Mucoid Impaction of the Bronchus. RPC from AFIP. Radiology 108:181-185, 1973.

7. Talner, L. B., Gmelich, J. T., Liebow, A. A. *et al:* The Syndrome of Bronchial Mucocoele and Regional Hyperinflation of the Lungs. Am. J. Roent. 110:675-686, 1970.

8. Hinson, K. F., Moon, A. J. and Plummer, N. S.: Bronchopulmonary Aspergillosis, Review and Report of 8 New Cases. Thorax 7:317-333, 1952.

*Reprints: James D. Maltby, M.D.
Dept. of Radiology
University of Missouri Medical Center
807 Stadium Rd.
Columbia, Mo. 65212*

Update: Irritable Bowel Syndrome

(Continued from page 264)

Subdiaphragmatic Reference of Pain From the Colon. Gastroenterology 22:222, 1952.

11. Almy, T. P.: Therapeutic Strategy in Stress Related Digestive Disorders. Clinics in Gastroenterology 6:709, 1977.

12. Taylor, I. and Duthie, H. L.: The Effect of Bran on Colonic Myoelectric Function in Diverticular Disease in Gastrointestinal Motility in Health and Disease. Edited by Duthie, L. H. Baltimore, University Park Press, 1978, p.225.

13. Fielding, J. F.: The Irritable Bowel Syndrome. Clinics in Gastroenterology 6:607, 1977.

14. Drossman, D. A., Powell, D. W. and Sessions, J. T.: The Irritable Bowel Syndrome. Gastroenterology 73:811, 1977.

15. Hislop, I. G.: Psychological Significance of the Irritable Bowel Syndrome. Gut 12:452, 1971.

16. Young, S. J., Alpers, D. H., Norland, C. C. and Woodruff, R. A.: Psychiatric Illness and the Irritable Bowel Syndrome. Gastroenterology 70:162, 1976.

DAVID M. KLACHKO, M.D., *Columbia*

Rational Use of Insulin

IN 1922, the report of the discovery of insulin by Banting and Best[1] revolutionized the management of diabetes mellitus. However, the marked decrease in mortality from ketoacidosis has been replaced by an increase in morbidity from the chronic complications of the disease. In the past few years, there has been an accumulation of evidence that good control of the hyperglycemia may delay the onset and decrease the severity of these complications.[2]

Insulin is the major hormone controlling glucose homeostasis. Insulin deficiency leads to hyperglycemia and ketosis and results in a generalized catabolic state. Thus, even in the fasting state, insulin secretion is necessary. Within a minute of a rise in glucose concentration in the blood perfusing the pancreas, insulin levels rise and remain elevated until euglycemia is restored. Therefore, ideal insulin therapy requires continuous provision of a small amount with an acute increase coincident with each feeding.

Modern technology has answered this challenge with production of an "artificial pancreas."[3] This consists of a glucose sensor which continuously measures glucose concentration and sends signals to a processor or computer which signals pumps to infuse insulin or glucose at rates sufficient to maintain blood glucose concentration within the normal range. However, problems with glucose sensors and miniaturization of infusion pumps will delay development of a practical implantable model for many years.

Normal insulin secretion also can be simulated by continuous intravenous infusions providing both a steady baseline concentration and accelerated rates with meals.[3] Although these procedures are useful as research tools or in an acute hospital setting, the practitioner is faced with the problem of maintaining optimal diabetic control using intermittent insulin injections.

TABLE 1
TIME COURSE (HOURS) OF INSULIN PREPARATIONS INJECTED SUBCUTANEOUSLY[4]

Action	*Insulin Type*	*Peak*	*Duration*
Short	Regular, crystalline	2-4	5-7
	Semilente	2-4	12-16
Intermediate	NPH	6-12	24-28
	Lente	6-12	24-28
Long	Protamine zinc	14-24	36+
	Ultralente	18-24	36+

INSULIN PREPARATIONS AND DURATION OF ACTION

Although the highly purified single-component beef or pork insulins may be useful in patients who have insulin allergy or insulin-induced lipoatrophy, most patients can use the commercial "single-peak" U100 insulin preparations which are mixtures of beef and pork insulins.[4] The time course of action of regular insulin varies according to the route of administration. A recent study comparing the effect of a dose of 0.1 units/kg body weight injected intravenously, intramuscularly or subcutaneously showed the maximum glucose-lowering effect to occur at 50, 150 and 210 minutes respectively.[5] Insulin has been modified in various ways in order to delay its absorption and prolong its effect. The duration of action of subcutaneous injections of the major insulin preparations is shown in Table 1.

Of the long-acting insulins, protamine zinc insulin is rarely used because after a morning injection, maximum absorption and action frequently occurs during the night. Ultralente, a crystalline zinc insulin suspension, comprises 70% of lente insulin and can be added to it to prolong its duration of action. The insulin preparations most commonly used for daily maintenance are the intermediate-acting insulins, lente and NPH insulin. The short-acting insulins, semilente or, more usually, regular insulin are used in acute situations. They also may be mixed with the intermediate-acting insulins.

The duration of action of the insulin preparations may vary according to the concentration and volume of the injected dose and the site of injection.[6] Absorption of insulin is accelerated by exercising the limb into which the injection has been given.[7] In addition, in some patients, there may be marked variations from day to day in the effect of identical insulin doses.[8] These factors help to emphasize the necessity for tailoring the insulin regimen according to the response of each individual patient.

The principles of insulin administration in diabetes mellitus are based upon studies of insulin physiology. The insulin-deficient patient requires multiple insulin doses daily. The more stable noninsulin-dependent patient has insulin resistance and may require only a single daily insulin supplement or, more frequently, reversal of insulin resistance by weight reduction. The author discusses variables affecting insulin absorption, methods of insulin administration in diabetic ketoacidosis and the use of the "sliding scale."

Dr. Klachko is Associate Professor of Medicine, Division of Endocrinology and Metabolism, University of Missouri-Columbia Medical Center.

SPECTRUM OF DIABETES

Diabetes mellitus is a syndrome associated with a relative or absolute deficiency of insulin. There is a wide spectrum of "glucose intolerance." At one end are patients who manifest hyperglycemia only after a large glucose challenge and those who have mild fasting hyperglycemia. These "noninsulin-dependent" patients, who are generally overweight, have relatively stable diabetes occurring in adult life and present with one of the complications of the disease or are discovered by a screening test.

At the other end of the spectrum is the "insulin dependent," ketosis-prone diabetes occurring in children or in young adults of normal or low body weight with an acute onset of the classical symptoms of polyuria, polydipsia and polyphagia or with ketoacidosis.

These two extreme types cannot be differentiated by age of onset alone. A few diabetic children may not be ketosis-prone, while some older adults have insulin-dependent diabetes. In addition, the severity of the disease may change with time. Stable, noninsulin-dependent diabetics may develop ketosis or even ketoacidosis at times of stress. Conversely, many insulin-dependent diabetics with ketoacidosis may go into temporary clinical remission associated with partial recovery of insulin secretory ability,[9] even after an episode of ketoacidosis.

USE OF INSULIN

Noninsulin-dependent diabetics

Recent research has shown that most diabetics have relative insulin resistance rather than insulin deficiency. The insulin resistance can be caused by a decrease in number or affinity of cell receptors for insulin or, in rare cases, by antibodies to insulin receptors.[10]

The most common type of insulin resistance is that associated with obesity. Although there also may be an intracellular defect affecting the response to insulin, obesity is associated with hyperinsulinism which leads to a decrease in the number of insulin receptors and relative insulin resistance.[11]

Further increases in blood insulin concentration lead to a further reciprocal decrease in insulin receptor number. This is manifested clinically in the hyperglycemic obese patient whose insulin requirements seem to rise progressively. A renewed emphasis on caloric restriction leads to a decrease in insulin requirements. Oral hypoglycemic agents may be useful in controlling symptomatic hyperglycemia during the course of weight reduction in such patients. Exercise may also play a part in the improvement of glucose tolerance as it may lead to an increased affinity of cell receptors for insulin.[12]

Noninsulin-dependent diabetics may require insulin therapy for control of ketosis during periods of physiological stress, for control of diabetic symptoms or for control of fasting hyperglycemia after failure of diet therapy. In these patients, the pancreas is capable of secreting insulin appropriately but not sufficiently to control the hyperglycemia. Therefore, most of these patients need only a supplement and may be controlled with a single daily dose of intermediate-acting insulin. Oral hypoglycemic agents may be used if insulin is contraindicated by difficulty or excessive risk in its administration at home on a regular basis or if the patient refuses to accept insulin therapy.

The major aim is to control the hyperglycemia before meals because all fluctuations due to food intake are superimposed upon this level. If a single daily dose of NPH insulin does not control nocturnal hyperglycemia, a change to lente insulin, which may have a longer duration of action than NPH insulin in some patients, or occasionally ultra-lente insulin alone[13] may permit continuation of a single daily dose. Alternatively, division into two doses with one quarter to one third of the daily insulin requirement in the evening will restore good control.

In a few patients, marked hyperglycemia after the morning or evening meal may require the addition of short-acting insulin although, frequently, a decrease in caloric intake may be a more appropriate prescription. Too much insulin leads to inappropriate stimulation of the appetite and continuing weight gain and may suppress insulin release from the patient's pancreas[14] or cause hypoglycemic episodes with rebound hyperglycemia and insulin resistance (the Somogyi effect).[15] It should be reemphasized that, although insulin supplementation may normalize blood glucose levels, the primary goal of therapy should be directed to a reduction of body fat which will be followed by increased tissue sensitivity to endogenous insulin.

Insulin-dependent diabetics

Patients with severe insulin deficiency require the provision of exogenous insulin 24 hours a day to prevent hyperglycemia and ketosis. Although it is impossible to simulate precisely the insulin secretory pattern of the pancreas, the best control currently is achieved by four doses of insulin daily. For practical use, these are combined into two injections daily by mixing short- and intermediate-acting insulins in each. An initial approximation of the division is to give three quarters of the total insulin dose in the morning.

The short-acting insulin will cover the morning requirements and the intermediate-acting insulin will have its peak action in the afternoon. The evening dose (one fourth of the total dose) contains short-acting insulin to cover the evening meal and intermediate-acting insulin to last through the night. Each of the four doses can be adjusted individually according to the results of urinary glucose tests done before meals or on fractional urine collections. When the degree of glycosuria does not reflect blood glucose levels, intermittent blood tests are used or the patient can be trained to measure blood glucose at home using Dextrostix.[16]

It is most important to maintain a fixed meal pattern and insulin schedule. The size of between-meal snacks can be adjusted to allow for varying amounts of activity. When active exercise is planned, the insulin should be injected into a part of the body which will be exercised least, e.g., the abdominal wall, to minimize the increased rate of absorption.[7]

Even with this regimen, we depend on the patient's pancreas for assistance. The advent of radioimmunoassays for C-peptide (the connecting peptide which is removed from proinsulin to form insulin) has shown that most of these patients still have some residual insulin secretion. The ease of blood glucose control appears to be related to the amount of persisting insulin secretion.[17] Some diabetics have substantial pancreatic reserve and do well with a single daily injection of insulin for years.

Diabetic ketoacidosis

Excessive attention has been paid to the dosage and route of administration of insulin during diabetic ketoacidosis. There are proponents for both "low dose" and "high dose" regimens. However, even the "low dose" methods achieve maximal physiologic blood concentrations of insulin.[18] Whether a regimen of intermittent intravenous high doses or intramuscular low doses or a continuous intravenous infusion of 6 to 15 u hourly after a loading dose of 10 to 20 u intravenously is used, the outcome is likely to be the same as long as insulin therapy is not interrupted or omitted for substantial periods. It is important to remember the shorter duration of insulin action by these routes and to recommence subcutaneous insulin injections when the acute phase is over. However, subcutaneous insulin should not be given while the patient is dehydrated because absorption may be erratic and delayed. The emphasis should not be on the method of insulin delivery but, instead, on the provision of adequate insulin while rehydration and the correction of electrolyte and acid-base imbalances are accomplished.[19]

The 'sliding scale'

The "sliding scale" of insulin dosage is commonly used at times of unknown or varying insulin requirements, such as after surgery. The six-hourly doses of regular insulin are based on the results of the urine tests for glucose and acetone. The usual order is for omission of insulin if the urine is glucose free. Although this rarely causes difficulties in the noninsulin-dependent patient, it frequently leads to problems in controlling the insulin-dependent diabetic. Blood glucose can rise rapidly in the absence of insulin. If an insulin-dependent patient receives no insulin, severe hyperglycemia and ketosis will be found six hours later. The therapeutic response to this will be the administration of a large dose of insulin, which often is large enough to eliminate glycosuria by the time of the next urine test, thus leading to omission of the next insulin dose. This sequence leads to extremely wide swings in blood

TABLE 2
SITUATIONS AFFECTING INSULIN REQUIREMENTS

Increase with:	**Obesity**
	Growth spurt of adolescence
	Infection, illness, anesthesia
	Steroid therapy
	Pregnancy
Decrease with:	**Weight reduction**
	Renal insufficiency
	Correction of poor control

glucose. An appropriate method for using the "sliding scale" is to give a dose of regular insulin every six hours with supplemental amounts if glycosuria of 2% to 5% is found. A concurrent infusion of dextrose solution should prevent unexpected hypoglycemia.

Adjusting insulin dosage

Insulin requirements vary between individuals, and attaining the best possible control may take a long period of trial and error. Except in acute situations, it is best not to alter the dose by more than 10% and to allow three to four days for equilibration. It is most important to avoid hypoglycemic episodes since they are followed by hyperglycemia and even ketosis due to the outpouring of counter-regulatory hormones.[15] Some conditions associated with a change in insulin requirements are listed in Table 2.

SUMMARY

The rational use of insulin requires appreciation of the fact that insulin is secreted 24 hours a day in the fasting as well as in the fed state. It requires definition of the goals of therapy, such as a supplement to the patient's own insulin, as a replacement of insulin deficiency to maintain the patient's metabolism as close to the physiologic range as possible, or as a temporary control measure to keep the patient away from the extremes of ketoacidosis and hypoglycemia. It requires knowledge of the various preparations of insulin available and how to use them. Finally, as in all other aspects of medical practice, it requires patience and care to adjust the therapeutic regimen to the specific requirements of each individual patient.

REFERENCES

1. Banting, F. G. and Best, C. H.: The Internal Secretion of the Pancreas. J. Lab. Clin. Med. 7:251, 1922.
2. Cahill, G. F. Jr., Etzwiler, D. D. and Freinkel, H.: Blood Glucose Control in Diabetes. Diabetes 25:237, 1976.
3. Santiago, J. V., Clemens, A. H., Clarke, W. L. and Kipnis, D. M.: Closed-Loop and Open-Loop Devices for Blood Glucose Control in Normal and Diabetic Subjects. Diabetes 28:71, 1979.
4. Galloway, J. A. and Bressler, R.: Insulin Treatment in Diabetes. Med. Clin. N. Amer. 62:663, July 1978.
5. Shahshahani, M. N. and Kitabchi, A. E.: Glucose-Lowering Effect of Insulin by Different Routes in Obese and Lean Nonketotic Diabetic Patients. J. Clin. Endocrinol. Metab. 47:34, 1978.
6. Binder, C.: Absorption of Injected Insulin: A Clinical-Pharmacological Study. Acta Pharmacol. Toxicol. 27: Suppl. 2:1, 1969.
7. Koivisto, V. A. and Felig, P.: Effects of Leg Exercise on Insulin Absorption in Diabetic Patients. N. Engl. J. Med. 298:79, 1978.
8. Molnar, G. D., Taylor, W. F. and Ho, M.D.: Day-to-Day Variation of Continuously Monitored Glycemia: A Further Measure of Diabetic Instability. Diabetologia 8:342, 1972.
9. Ludvigsson, J. and Heding, L. G.: Beta Cell Function in Children With Diabetes. Diabetes 27: Suppl. 1:230, 1978.
10. Flier, J. S., Kahn, C. R. and Roth, J.: Receptors, Antireceptor Antibodies and Mechanisms of Insulin Resistance. N. Engl. J. Med. 300:413, 1979.
11. Olefsky, J. M.: The Insulin Receptor: Its Role in Insulin Resistance of Obesity and Diabetes. Diabetes 25:1154, 1976.
12. Soman, V. R., Koivisto, V. A., Grantham, P. and Felig, F.: Increased Insulin Binding to Monocytes After Acute Exercise in Normal Man. J. Clin. Endocrinol. Metab. 47:216, 1978.
13. Holman, R. R. and Turner, R. C.: Diabetes: The Quest for Basal Normoglycemia. Lancet 1:469, 1977.
14. Horwitz, D. L., Rubenstein, A. H., Reynolds, C., Molnar, G. D. and Yanaihara, N.: Prolonged Suppression of Insulin Release by Insulin-Induced Hypoglycemia: Demonstration by C-Peptide Assay. Horm. Metab. Res. 7:449, 1975.
15. Somogyi, M.: Exacerbation of Diabetes by Excess Insulin Action. Am. J. Med. 26:169, 1959.
16. Skyler, J. S., Lasky, I. A., Skyler, D. L., Robertson, E. G. and Mintz, D. H.: Home Blood Glucose Monitoring as an Aid in Diabetes Management. Diabetes Care 1:150, 1978.
17. Horwitz, D. L., Rubenstein, A. H. and Steiner, D. G.: Proinsulin and C-Peptide in Diabetes. Med. Clin. N. Amer. 62:723, July 1978.
18. Podilla, A. J. and Loeb, J. N.: "Low-Dose" Versus "High-Dose" Insulin Regimens in the Management of Uncontrolled Diabetes. Am. J. Med. 63:843, 1977.
19. Clements, R. S. Jr., and Vourganti, B.: Fatal Diabetic Ketoacidosis: Major Causes and Approaches to Their Prevention. Diabetes Care 1:314, 1978.

Reprints: David M. Klachko, M.D.
Department of Medicine
University of Missouri
M749 Medical Center
Columbia, Mo. 65212

"Medicare may not be such a bargain. According to a study by the General Accounting Office, federal workers who handle Medicare claims earn more for less work then their counterparts in private industry. Furthermore, the study shows that the government's cost of handling medical claims — $12.39 for each claim processed by the Social Security Administration in 1973 — is about double that of private insurers ($6.49 per claim). And, as anyone who has dealt with government bureaucracies no doubt knows, the government is slower than the private insurers in paying claims." — *Modern Maturity*, September, 1978.

DONALD N. KAPSCH, M.D. *and*
DONALD SILVER, M.D., *Columbia*

Heparin Induced Thrombocytopenia

A Life and Limb Threatening Complication of Heparin Therapy

THERE IS SUCH CONVINCING EVIDENCE that heparin favorably influences the morbidity and mortality of thromboembolic disorders that it has become the therapeutic agent of choice for their management. Not only is heparin beneficial, but when administered carefully, it is virtually free of complications. Hemorrhage is the most common complication of heparin therapy, but allergic reactions (urticaria, bronchospasm and others), alopecia, hyperaldosteronism and osteoporosis have been noted.[1-4]

With the increasing therapeutic and prophylactic use of heparin, a rare complication of heparin therapy is being recognized with increased frequency. Since 1962, several reports have documented the association of a heparin induced thrombocytopenia with new or recurrent thromboembolic phenomena.[5-12] The thrombocytopenia and associated thromboembolic phenomena occur in the absence of excessive intravascular coagulation, and current laboratory data are consistent with an antibody-induced platelet aggregation as the cause of the thrombocytopenia and the complications. The thrombocytopenia resolves and the thromboembolic complications remit when heparin therapy is discontinued.

Our experience with 22 patients with this disorder forms the basis of this report.

With the increasing therapeutic and prophylactic use of heparin, this rare complication of heparin therapy is being recognized with increased frequency. Because of its unpredictable occurrence, insidious onset and potentially serious sequelae, platelet count monitoring is recommended for all patients receiving heparin for more than six days. Discontinuation of heparin is required for the successful management of patients with this disorder.

Dr. Kapsch and Dr. Silver are from the Department of Surgery, University of Missouri-Columbia School of Medicine. This work was supported by United States Public Health Service Grant HL 18815.

MATERIALS AND METHODS

Platelet-rich and platelet-poor plasma were prepared from whole blood collected in 3.8% citrate (1ml anticoagulant/9ml blood) and subjected to differential centrifugation at room temperature. Type specific, fresh, normal donor platelets were utilized for aggregation studies. Platelet-poor plasma from patients with heparin induced thrombocytopenia was stored at −70 C.

Platelet counts were performed in duplicate by phase microscopy[13] or with the Coulter® counter. Coagulation tests on 17 patients included the activated partial thromboplastin time, prothrombin time, fibrinogen concentration and fibrin degradation product concentrations. Four of the remaining five patients did not have fibrinogen and fibrin degradation product assays due to the absence of complications and the presence of positive aggregation studies.

Duplicate platelet aggregation studies were performed on plasma from 21 patients with the Chronolog® aggregometer according to the method of Fratantoni *et al.*[7]

Four patients, who were previously reported, were rechallenged with heparin following the resolution of their thrombocytopenia.[11]

All patients, with the exception of the first, were anticoagulated with beef lung heparin (Upjohn). The first patient received porcine heparin.

RESULTS

The patients' ages varied from 19 to 69 years, with 20 of the 22 patients being older than 40 years of age (Table 1). The patients were evenly distributed in regard to sex. Thirteen patients had been admitted for heparin management of venous

TABLE 1

Patient	*Sex*	*Age*	*Indication for Heparin Therapy*	*Heparin Dose/24 hrs**
# 1	F	69	Pulmonary embolism	24,000-50,000
# 2	F	56	Thrombophlebitis	24,000-30,000
# 3	F	52	Pulmonary embolism	40,000-75,000
# 4	F	51	Prophylaxis	9,000-12,000
# 5	F	46	Prophylaxis	12,000
# 6	M	44	Thrombophlebitis	30,000-72,000
# 7	F	58	Arterial thrombosis	16,000-32,000
# 8	M	50	Pulmonary embolism	45,000-70,000
# 9	F	41	Pulmonary embolism	24,000-33,000
#10	F	56	Pulmonary embolism	28,000
#11	M	69	Arterial embolism	15,000-24,000
#12	M	19	Iliofemoral thrombosis	30,000
#13	M	52	Thrombophlebitis	24,000-40,000
#14	M	64	Iliofemoral thrombosis	24,000
#15	M	56	Pulmonary embolism	24,000
#16	M	41	Arterial thrombosis	15,000-27,000
#17	M	55	Iliofemoral thrombosis	24,000-30,000
#18	M	26	Iliofemoral thrombosis	34,000-50,000
#19	F	60	Iliofemoral thrombosis	24,000
#20	F	68	Pulmonary embolism	24,000
#21	F	65	Prophylaxis	15,000
#22	M	58	Prophylaxis	15,000

* Range in international units.

or arterial thromboembolism. One of the remaining nine patients had been admitted for treatment of an acute spinal cord injury and associated paraplegia, two for elective orthopedic procedures, one for an elective abdominal hysterectomy, two for radical mastectomy, two for complications of rheumatic heart disease and one for treatment of an acute myocardial infarction. One patient had metastatic ovarian carcinoma and one patient was undergoing radiation and chemotherapy for recurrent breast carcinoma. There were two patients with adult-onset diabetes mellitus and one with myeloid metaplasia. One patient had had a previous hypophysectomy and a recent splenectomy. Three patients were noted to have drug allergies to aspirin, radiographic contrast material, pHisoHex®, Betadine® or penicillin.

All patients received heparin intravenously for thromboembolic disorders (18 patients) or 3,000 to 5,000 units of prophylactic subcutaneous heparin every eight to 12 hours. The patients who developed thromboembolic complications (14 of 18 receiving intravenous therapy and three of four receiving prophylactic therapy) did so during the period of heparin administration. Daily heparin dosages ranged from 9,000 units subcutaneously to 75,000 units intravenously. Increasing heparin requirements for maintenance of adequate anticoagulation preceded the development of thromboembolic complications in ten patients.

In 15 patients, thromboembolic complications developed after a latency period of six to 14 days (mean of eight to nine days), following initiation of heparin therapy. In two additional patients, severe thrombocytopenia and recurrent thromboembolic phenomena developed within 48 hours of reinstituting heparin therapy. These patients had received five and six days of prophylactic heparin therapy six and 14 days prior to initiation of intravenous therapeutic heparin (Table 2).

The thrombohemorrhagic complications included new or recurrent arterial thromboembolism in six patients, new or recurrent pulmonary embolism in five patients, progression of deep venous thrombosis in three patients, cerebrovascular accidents in two patients and an intracerebral hemorrhage in one patient. Three of the four patients receiving prophylactic heparin developed significant complications; acute aorto-iliac occlusions occurred in two and the intracerebral bleed in one. These complications occurred without warning and were associated with platelet counts ranging from 5,000-68,000/mm^3 (mean of 29,000/mm^3).

All patients demonstrated a significant increase in their platelet count following cessation of heparin therapy. An increase in the platelet count to 100,000/mm^3 or greater was noted within 96 hours in 19 of the 20 patients surviving for that length of time. The one patient not demonstrating an increase in platelet count greater than

TABLE 2

Patient	*Complicating Event*	*Date of Complication**	*Lowest Platelet Count†*	*Survival*
# 1	Recurrent pulmonary embolism	9	5,000	Yes
# 2	Arterial embolism	12	17,000	Yes
# 3	Recurrent pulmonary embolism	10	23,000	Yes
# 4	Acute aortoiliac occlusion	8	54,000	Yes
# 5	Intracerebral hemorrhage	11	30,000	Yes
# 6	Pulmonary embolism/MI	8	14,000	Yes
# 7	CVA/recurrent arterial thrombosis	12	40,000	No
# 8	Recurrent pulmonary embolism	10	15,000	No
# 9	Recurrent pulmonary embolism	9	10,000	No
#10	None	—	68,000	Yes
#11	Recurrent arterial embolism	8	12,000	Yes
#12	Progression of iliofemoral thrombosis	11	74,000	Yes
#13	Acute aortoiliac occlusion	6	27,000	Yes
#14	CVA	6	25,000	No
#15	Recurrent pulmonary embolism	14	20,000	No
#16	Recurrent arterial thrombosis	2‡	15,000	No
#17	None	10§	50,000	Yes
#18	None	9§	56,000	Yes
#19	Progression of iliofemoral thrombosis	1‡	24,000	No
#20	None	—	8,000	Yes
#21	Acute aortoiliac occlusion	15	28,000	Yes
#22	None	6§	96,000	Yes

*** Date of complication refers to the day following initiation of heparin therapy on which the complication occurred.**
† Thousands/mm^3.
‡ Prior heparin exposure within two weeks of reinitiation of heparin therapy.
§ Date at which thrombocytopenia was discovered in patients without complications.

100,000/mm^3 had concurrent myeloid metaplasia and was noted on follow-up one month after discharge to have a platelet count of 225,000/mm^3. Bone marrow specimens obtained from five patients during their period of thrombocytopenia demonstrated normal or increased numbers of megakaryocytes.

Prothrombin times, activated partial thromboplastin times, plasma fibrinogen concentrations and fibrin degradation products were essentially normal with the exception of mildly elevated concentrations of fibrin degradation products in the patients with pulmonary embolism (Table 3).

Surgical intervention was required in eight patients. Two early patients had five thromboembolectomies for acute aorto-iliac occlusions; patency could not be maintained and three lower limbs were amputated. Two thrombectomies of a brachial artery in a single patient also failed. Heparin was administered before, during and after surgery in these three patients. Four patients had successful distal aortic thromboembolectomies with heparin being discontinued in the postoperative period. The one major bleeding episode, a right intracerebral hematoma, required an emergency craniotomy and right temporal lobe resection. Myocardial infarction was associated with the development of thromboembolic phenomena in three patients. Less severe bleeding occurred in four patients.

Alternate anticoagulation regimens included aspirin, warfarin, dipyridamole and low molecular weight dextran. Vitamin K, Konyne® and platelet transfusions were utilized to treat the intracerebral hemorrhage.

Recurrent thromboembolic or hemorrhagic complications ceased only after discontinuing heparin. Hospitalization time ranged from 17 to 83 days with a mean of 26 days. There were six inhospital deaths and one late death with the heparin related complications representing major contributing factors to the cause of death in each patient.

Aggregation was noted when heparin was added to a mixture of normal donor platelets and platelet-poor plasma from 18 of the 22 patients. One patient was not studied and three patients demonstrated no aggregation in response to heparin administration. The four patients without positive aggregation studies had clinical courses and other laboratory studies similar to the 18 patients demonstrating in vitro heparin induced platelet aggregation.

In positive studies, aggregation occurred after a latency period of 10 seconds to 5 minutes following the addition of heparin. No aggregation oc-

TABLE 3

Patient	*Aggregation Studies*	*Prothrombin as Percent of Normal Activity or Patient/Control*	*Fibrinogen mgm%*	*FDP mcg%*
# 1	Positive	1.2-1.4	275-300	25-100
# 2	Positive	1.2-2.5*	200-300	25
# 3	Negative	(2.5-1.5)†	275-345	—
# 4	Positive	1.0-1.1	295-360	25
# 5	Negative	1.1-1.4	200	25
# 6	Positive	1.0-1.3	200-250	25
# 7	Positive	—	—	—
# 8	Positive	1.1-1.3	400-650	25-100
# 9	Positive	60%	214	40
#10	Positive	100%	—	—
#11	Positive	75%	251	10
#12	Positive	51%	425	50
#13	Positive	86%	260	40
#14	Not done	93%	350	10
#15	Positive	50%	295	10-40
#16	Negative	57%	170	10-40
#17	Positive	87%	—	—
#18	Positive	28%*	—	—
#19	Positive	88%	376	50
#20	Positive	90%	—	—
#21	Positive	80%	228	50
#22	Positive	56%	—	—

* High ratio or decreased activity secondary to coumadin.
† Elevated ratios from 50-75,000 units of heparin daily.

curred in the absence of heparin or aggregating agents such as ADP.

Discussion

The number of patients receiving heparin has increased steadily with the demonstration of its favorable effects in the treatment and prophylaxis of thromboembolic disease. When the dosage is carefully monitored, heparin administration is associated with few complications which are usually of minimal consequence and are controlled by discontinuation of the heparin therapy. Heparin induced thrombocytopenia is a rare complication of heparin therapy, occurring with an incidence of 0.6% among all patients receiving heparin during a recent six-month period at the University of Missouri-Columbia Medical Center. Unfortunately, the heparin induced thrombocytopenia is infrequently suspected because its sequelae often mimic or exacerbate the underlying condition for which the heparin is being administered. However, this complication of heparin therapy must be recognized and treated promptly before it becomes limb or life threatening.

Thrombocytopenia was not recognized in 17 of our 22 patients before the development of thromboembolic or hemorrhagic complications. Heparin therapy was discontinued in three patients without complications prior to the recognition of their thrombocytopenia.

Platelet count monitoring during heparin therapy allowed the identification of two additional patients and cessation of heparin prior to the development of heparin related complications. Significant thrombocytopenia, with platelet counts as low as 5,000/mm^3 and a mean of 29,000/mm^3, occurred in all patients. The thrombohemorrhagic complications of 17 patients represented significant morbidity and contributed to the demise of seven patients. Discontinuation of heparin therapy led to prompt increases in the platelet count and prompt cessation of the thrombohemorrhagic complications.

Declining platelet counts and increasing heparin requirements to maintain therapeutic levels of anticoagulation should alert one to the presence of this disorder. A heparin induced thrombocytopenia is confirmed when (1) coagulation testing eliminates the possibility of accelerated intravascular coagulation as a cause of the thrombocytopenia; (2) the platelet aggregation studies are positive; and (3) the platelet count returns toward normal when heparin is discontinued. Treatment of the heparin induced thrombocytopenia consists of stopping the heparin and substituting platelet antiaggregation agents and oral anticoagulants when continued inhibition of the coagulation process is required. Both the thrombocytopenia and thrombohemorrhagic complications respond to cessation of heparin therapy and the prognosis for recovery is excellent. No patient who was not already moribund died with heparin related complications once appropriate therapy had been instituted.

The exact duration of platelet heparin sensitivity is not known. Patients receiving a heparin rechallenge up to two months postrecovery have demonstrated a thrombocytopenic response to readministration of heparin, while one patient received a five-day course of heparin therapy four months postrecovery without consequences.[11] The ability of platelet-poor plasma to confer heparin sensitivity to normal donor platelets in aggregation studies appears to decrease rapidly as this response was absent in two patients studied two months postrecovery. The host platelet response to heparin administration, both in vitro and in vivo, persists longer and was elicited in aggregation studies utilizing the platelet rich plasma from two affected individuals studied two months postrecovery. This result suggests that the plasma component responsible for the platelet heparin sensitivity, presumably a platelet membrane antibody, is primarily platelet bound even in the absence of heparin. Current laboratory investigations are directed toward defining the characteristics and mode of action of the heparin sensitizing agent in this disorder.

We have been unable to identify reliable risk factors for the development of this disorder. Its unpredictable occurrence, insidious onset and potentially serious sequelae make the monitoring of platelet counts and close clinical observation of patients receiving heparin for more than six days essential. The development of a decreasing platelet count, increasing heparin requirements or a new or recurrent thromboembolic event strongly suggests the presence of this disorder. Discontinuation of heparin is mandatory if these patients are to be managed successfully as the thromboembolic complications and thrombocytopenia remit only after cessation of heparin therapy.

References

1. Bernstein, I. L.: Anaphylaxis to Heparin. JAMA 161:1379, 1956.
2. Fidlar, E. and Jacques, L. B.: The Effect of Commercial Heparin on the Platelet Count. J. Lab. Clin. Med. 33:1410, 1948.
3. Gotz, A.: Severe Spontaneous Hypersensitivity to Heparin. Ann. Intern. Med. 35:919, 1951.
4. O'Toole, R. D.: Letter: Heparin: Adverse Reaction. Ann. Int. Med. 79:759, 1973.
5. Babcock, Robert B., Dumper, C. Wesley and Scharfman, William B., Heparin-Induced Immune Thrombocytopenia. N. Eng. J. Med. 295:237, 1976.
6. Bell, William R., Tomasulo, Peter A., Alving, Barbara M. and Duffy, Thomas P.: Thrombocytopenia Occurring During the Administration of Heparin. Ann. Intern. Med. 85:155, 1976.
7. Fratantoni, Joseph, Pollet, Robert and Gralnick, Harvey R.: Heparin-Induced Thrombocytopenia: Confirmation of Diagnosis With In Vitro Methods. Blood 45:395, 1975.
8. Gollub, S. and Ulin, Alex W.: Heparin-Induced Thrombocytopenia in Man. J. Lab. Clin. Med. 59:430, 1962.
9. Nateleson, Ethan A., Lynch, Edward C., Alfrey, Clarence P. and Gross, James B.: Heparin Induced Thrombocytopenia: An Unexpected Response to Treatment of Consumption Coagulopathy. Ann. Intern. Med. 71:1121, 1969.
10. Rhodes, G. R., Dixon, R. H. and Silver, Donald: Heparin Induced Thrombocytopenia With Thrombotic and Hemorrhagic Manifestations. Surg Gynecol. Obstet. 136:409, 1973.
11. Rhodes, G. R., Dixon, R. H. and Silver, Donald: Heparin Induced Thrombocytopenia: Eight Cases With Thrombotic-Hemorrhagic Complications. Ann Surg. 186:752, 1977.
12. Trowbridge, Arthur A., Caraveo, Juan, Green, Jacob B., III, Amaral, Barbara and Stone, Marvin J.: Heparin-Related Immune Thrombocytopenia: Studies of Antibody-Heparin Specificity. Am. J. Med. 65:277, 1978.
13. Brecher, George, Schneiderman, Marvin and Cronkite, Eugene P.: The Reproducibility of the Platelet Count. Am. J. Clin. Pathol. 23:15, 1953.

Reprints: Donald A. Kapsch, M.D.
Dept. of Surgery
M580 University Medical Center
Columbia, Mo. 65212

In Memoriam

A. Herman Hutto, M.D., 4605 Lindell, St. Louis 63108; a graduate of Washington University, 1935; member of St. Louis Metropolitan Medical Society; age 68; died Dec. 20, 1978.

John W. Hunt, M.D., Rt. #1, Box 101, Farmington 63640; a graduate of the University of Louisville, 1935; member of Mineral Area County Medical Society; age 70; died Feb. 17, 1979.

Winton T. Stacy, M.D., 1215 N. 24th, St. Joseph 64506; a graduate of Washington University, 1925; member of Buchanan County Medical Society; age 83; died Feb. 19, 1979.

Walter P. Jacob, M.D., 601 E. 63rd, Suite 301, Kansas City 64110; a graduate of the University of Berlin, 1946; member of Jackson County Medical Society; age 69; died March 23, 1979.

Philip Sneid, M.D., 101 Doctors Bldg., West, 701 E. 63rd, Kansas City 64110; a graduate of the University of Toronto, 1948; member of Jackson County Medical Society; age 67; died March 25, 1979.

DO YOU REMEMBER THESE TWO GREATS?

BOBBY JONES
1902-1971
BABE RUTH
1895-1948

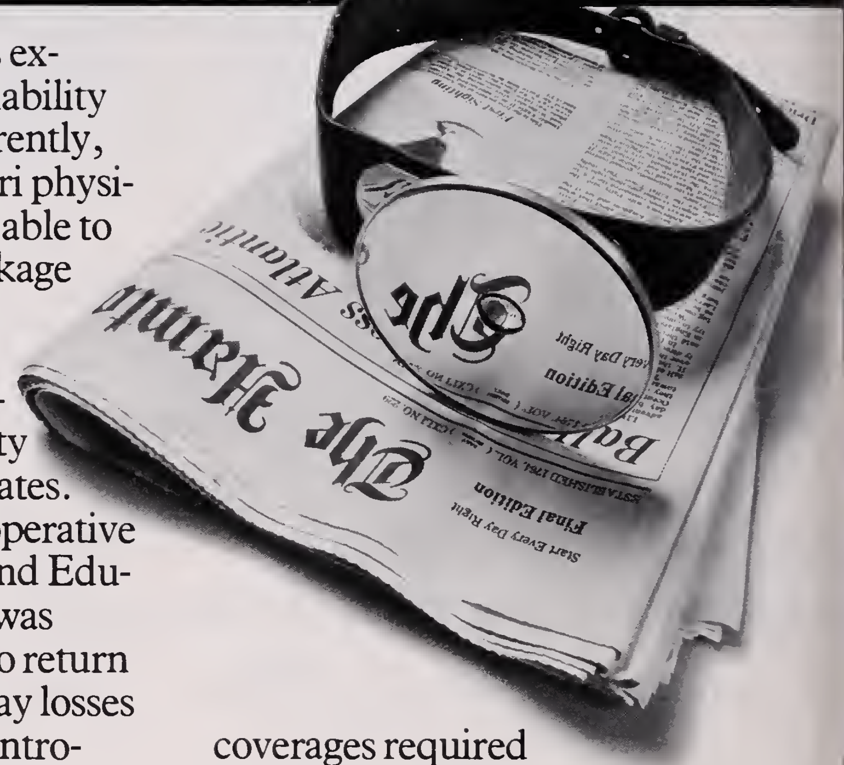
HIS PAIR OF BRONZE MEDALLIONS WITH RAISED
GURES OF BOBBY JONES AND BABE RUTH CAN
BE YOURS IN EXCHANGE FOR FIVE MINUTES.

ND A LIST OF YOUR ANTICIPATED MEDICAL EQUIPMENT
EDS FOR YOUR OFFICE FOR 1979 TO JOE SHERMAN A
1 GAGE BLVD. TOPEKA, KANSAS, 66601.

OUR MUNNS REPRESENTATIVE WILL DELIVER
O YOU YOUR SET OF MEDALLIONS....IT'S THAT
ASY.

IS OFFER EXPIRES JUNE 30, 1979, AND QUANTITIES
E LIMITED SO DON'T DELAY!

MUNNS
MEDICAL
SUPPLY



ÆTNA HAS GOOD NEWS FOR MISSOURI PHYSICIANS.

Ætna Life & Casualty is expanding its Professional Liability Program in Missouri. Currently, we insure over 500 Missouri physicians and are pleased to be able to make this outstanding package available to more.

Put our experience to work for you. Ætna has instituted professional liability programs in many other states. One special feature is a cooperative program of Loss Control and Education. Where experience was favorable, Ætna was able to return premiums not needed to pay losses and expenses. We're now introducing this valuable feature in Missouri.

By working with Ætna, Missouri physicians help control the costs of their premiums by controlling their losses. At the same time receiving the necessary coverages required by today's medical realities.

All together, this adds up to good news for Missouri physicians. For details, contact your local Ætna agent or return the coupon below.

Ætna
LIFE & CASUALTY

Ætna Professional Liability Program for Missouri Physicians.
Without obligation, I'd like to know more about this Program.

Name ____________________
Address ____________________
City ____________________ State ________ Zip ________

Write to: William C. Dvorak, Manager
Ætna Life & Casualty
940 West Port Plaza
Suite 450
St. Louis, MO 63141

or

Robert S. Johnson, Manager
Ætna Life & Casualty
Commerce Tower Building
911 Main Street
Kansas City, MO 64105

The Ætna Casualty and Surety Company
The Standard Fire Insurance Company

President's Message

John Martin's smiling face and humor will be missed on this page, but he will continue to be a prime mover of MMPAC. Our Political Action Committee is one of the most important tools that physicians have in helping assure our patients of the best possible care. John needs the support of every physician who wants to see political candidates elected who will listen to the voice of organized medicine. Please join MMPAC by sending a check for $25 to P.O. Box 1042, Jefferson City, Mo. 65102.

Andrew McCanse, M.D.

Having just attended the 121st Annual Session of the House of Delegates, I have been updated on one of Missouri's most important problems, medical care for the poor. The Medicaid program was adopted with our support in 1968. Over the following ten years, the program has been characterized by inadequate funding, unrealistic budgeting and increasing numbers of the poor who have difficulty finding non-emergency care. Physicians have found that in many instances, Medicaid does not pay their costs for seeing these patients and, therefore, they have had to support the program from their own pockets.

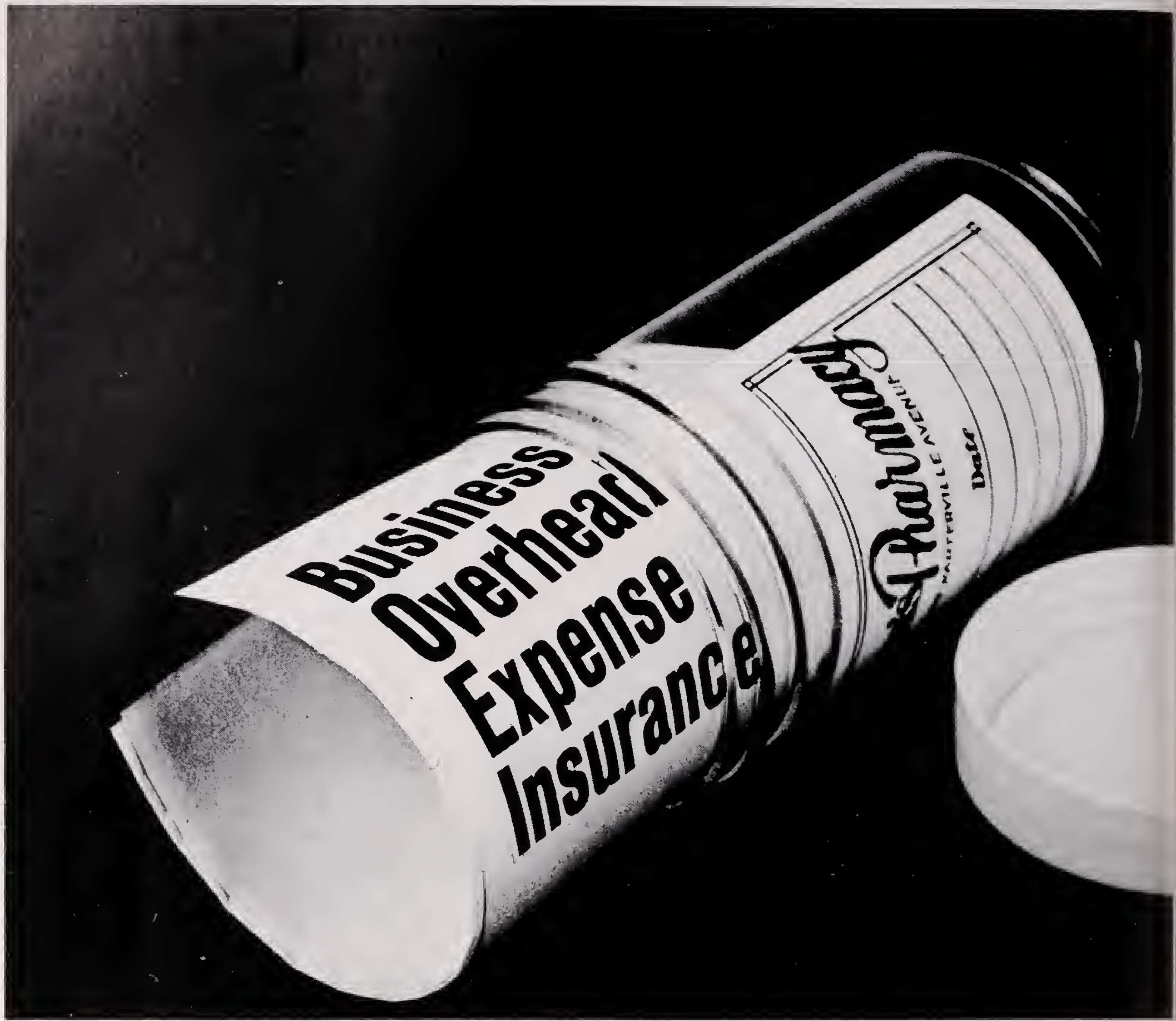
The result of inadequate state funding has been that more and more physicians have dropped out of the program, leaving these patients to seek care from a smaller and smaller number of doctors. In many cases, the physicians will see the patients without billing for the services since the cost of billing is larger than the reinbursement from the state.

The fee schedule compounds the problem. There were two *reductions* in the fee schedule in 1970 and again in 1971. There was a small increase in the schedule in 1977. The net effect is that we have nearly the same schedule of fees in 1979 that was present in 1968. How is that for dealing with inflation? The budget bill in the current legislative session would increase fees by 7%, after ten years of no change.

Within the past few months, an Emergency Rule was put into effect by the Division of Family Services, which administers the Medicaid program in Missouri. The rule calls for a hearing by the Division for any physician who has an outstanding Medicaid bill of $100 or more which is unpaid or late in being paid or if there is a grievance with the program. This new rule was finally passed after the federal administrators told the Division of Family Services that they were not in compliance with the federal requirements on these hearings. House Bill 88, now being considered by the Missouri Senate, would upgrade the hearing process by having the hearing held before the Hearing Commissioner, who is not part of Family Services. Ask your Senator to support HB 88.

In August, the claims processing for Medicaid will be taken over by a new private computer service in Texas. It is hoped that this change will remove some of the delays and coding errors that have characterized the program in Missouri. The General Assembly of Missouri forced this change.

In the meantime, what happens to medical care for the poor? They will continue to receive emergency treatment as always. In some areas, they may have to shop for non-emergency care from a physician who can afford to support them from this practice. All the while, the Division of Family Services is showing fiscal responsibility by turning back to the state somewhere between $8 and $800,000 saved through their management of Medicaid for Missouri. We call on Governor Teasdale to act on his expressed compassion for the less fortunate and help correct a situation which begs for his attention.



A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

FOUNDED 1924
AUXILIARY TO THE MISSOURI STATE MEDICAL ASSN.

MSMA Auxiliary

It is one of the most beautiful compensations of this life that no man can sincerely try to help without helping himself. — Ralph Waldo Emerson

My year of serving the MSMA Auxiliary as president-elect has been a full one. It has been a year of learning, traveling and working more closely with the Missouri State Medical Association within our state and communities.

The privilege of attending the MSMA Council meetings has enlightened me in regard to health problems as well as the concerns we have in medical practice.

The annual convention in St. Louis was an exciting one and a time for the celebration of deeds accomplished and the start of a new year. In the process of appraisal, we redefine our goals and set out for our future.

This coming year will be a different year for me. Last year was a time for asking questions. Now comes the time to be able to answer the questions. It will be a great pleasure to work with Mrs. Donald A. Fakhoury of Kansas City, our new president-elect.

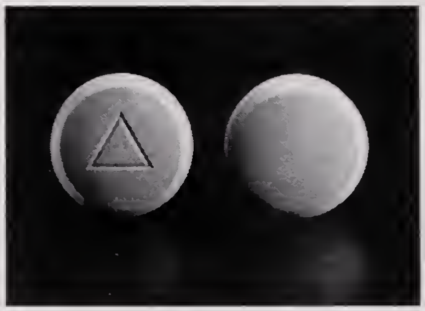
We in the Auxiliary are pledged to extend and promote the aims of the Missouri State Medical Association in its programs for the advancement of medicine and public health. This is our continued goal.

Mrs. Rudy Ruhling
President

I sincerely hope that 1979 will be a tremendous year and that 1980 will be even greater.

The Maker

Examining a Few Myths About Prescribing.



Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand–name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were not bioequivalent to a reference product. As y know, there is substanti literature on this subjec affecting many drugs, i cluding such antibiotic as tetracycline and erythromycin. The record drug recalls and court actions affirms strongly that there are differenc among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practic minimum quality assurance.

MYTH: Industry favors only "expensive" brand names and denigrates all generics.

FACT: PMA companies make 90 to 95 percent the drug supply, including, therefore, most of t generics. Drug nomenclature is not the important point; it's the comp tence of the manufacturer and the integrity the product that count.

Matters.

MYTH: Generic options almost always exist.

FACT: About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.

FACT: Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

PMA

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

Obsolete and Ineffective Procedures

At the Interim Session of the MSMA House of Delegates held in November, 1977, the MSMA Commission on Interspecialty Medicine, through its component members, was asked to conduct a review of obsolete and ineffective procedures unique to each specialty.

Specialty: **American College of Physicians**
Procedures:

Amylase, blood isozymes, electrophoretic
Chromium, blood
Guanase, blood
Mucoprotein, blood (seromucoid)
Zinc sulphate turbidity, blood
Skin test, cat scratch fever
Skin test, lymphopathia venereum (Frei test)
Circulation time, one test
Congo red, blood
Hormones, adrenocorticotropin quantitative animal tests
Hormones, adrenocorticotropin quantitative bioassay
Skin test, actinomycosis
Skin test, brucellosis
Skin test, leptospirosis
Skin test, psittacosis
Skin test, trichinosis
Calcium, feces, 24-hour quantitative
Starch, feces, screening
Chymotrypsin, duodenal contents
Gastric analysis pepsin
Autogenous vaccine
Calcium clotting time
Calcium saturation clotting time
Capillary fragility test (Rumpel-Leede) (independent procedure)

Specialty: **Anesthesiology**
Procedures: None

Specialty: **Blue Shield**
Procedures:

The following list of obsolete procedures was presented to the MSMA Council on Feb. 3, 1979. The Council has stated that some of the procedures have application in individual cases and may be used when that application can be documented.

Surgical Procedures

Fascia lata by stripper (when used to treat lower back pain)
Fascia lata by incision (when used to treat lower back pain)
Ligation of femoral vein, unilateral and bilateral (when used to treat post-phlebitic syndrome)
Ligation of internal mammary arteries, unilateral or bilateral
Radical Hemorrhoidectomy, Whitehead type
Omentopexy (portal obstruction)
Kidney decapsulation, unilateral and bilateral
Perirenal insufflation
Nephropexy
Fabric wrapping of abdominal aneurysm
Circumcision, female
Hysterotomy, non-obstetrical, vaginal approach
Supracervical hysterectomy
Uterine suspension
Uterine suspension with presacral sympathectomy
Ligation of thyroid arteries (independent procedure)
Excision of carotid body tumor (when used to treat asthma)
Sympathectomy, thoracolumbar, unilateral or bilateral (when used to treat hypertension)
Hypogastric or presacral neurectomy
Sympathectomy, lumbar (when used to treat hypertension)
Splanchnicectomy, unilateral, bilateral (when used to treat hypertension)
Extra-intral cranial arterial bypass
Bronchoscopy — with injection of contrast medium for bronchography
Bronchoscopy — with injection of radioactive substance

Diagnostic Procedures

Angiocardiography, single plane, supervision and interpretation only and in conjunction with cineradiography
Angiocardiography, multiplane supervision and interpretation only in conjunction with cineradiography
Angiocardiography, using carbon dioxide, supervision and interpretation only
Angiography-coronary, unilateral, selective injection, supervision and interpretation only, single view (unless in an emergency)
Angiography extremity, unilateral, supervision and interpretation only, single view (unless emergency)
Protein Bound Iodine (PBI)
Icterus Index
Basal Metabolic Rate (BMR)
Ballistocardiogram (BCG)
Phonocardiogram with interpretation and report

Specialty: **Dermatology**
Procedures: No general consensus by members.

Specialty: **Neurosurgeons**
Procedures: No general agreement regarding obsolete procedures.

Specialty: **OB-GYN**
Procedures: In general agreement with Blue Shield List, but wish each case to be considered individually.

Specialty: **Pathology**
Procedures:

A/G Ratio
Alkaline Phosphatase Isoenzymes
Acid Phosphatase, Total
BSP
Bilirubin
Butanol Extractable Iodine
Cephalin Cholesterol Flocc.
Colloidal Gold on Spinal Fluid
Complement Fixation for Syphilis
11 Deoxy/11 Oxy-17 Ketogenic Steroids
ETR
Fecal Trypsin
Figlu Method for B-12 and Folate
Glutathione

(Continued on next page)

Guinea Pig Inoculation for T.B. Isolation
HGG-Urine
Histoplasma Latex Agglutination
Icterus Index
17 Ketogenic Steroids, Urine Bismuthate Method
17 Ketosteroids, Beta/Alpha Ratio
17 Ketosteroids, Plasma
Kynurenic and Xanthurenic Acids
LAP
Nitroblue Tetrazolium
Phenylpyruvate
Phospholipids
Pregnancy Test in Animals
Renin by Bioassay
Reinsch Test for Heavy Metals
Sabin-Feldman Dye Test for Toxoplasma Antibodies
SGPT (unnecessary if you have SGOT)
Thymol Flocculation
Thymol Turbidity
Thyroxine by Ion Exchange Column
T.P.I.
Tubeless Gastrics
Total Lipids
Urinary Estriols (Placental)

Specialty: **Pediatrics**
Procedures:

Basal metabolism rate for thyroid function
Protein bound iodine for thyroid function
Cultures for pathogenic *E. coli*
Urea clearances — P.S.P. for renal function
Non-protein nitrogen levels
Lupus erythematous preparations
Irrigation of peritoneal cavity with aminoglycoside solutions
Antidiarrheal agents in children less than 2 years of age — toxicity — lack of effect
Office dilatations in girls
Y-U plasty of bladder neck
Ileal conduits in children
Unroofing of ureterocoeles
T.U.R. of bladder neck in girls
Enuresis treatment with probanthine, atropine or belladonna
Latex foley catheters in children
Politzerization of middle ear
Radiation of adenoids
Radon seeds insertions in adenoids
Radon seeds insertions in hemangioma

Specialty: **Physical Medicine & Rehabilitation**
Procedures:

Diagnostic and evaluation procedure: In electrodiágnosis the "reaction of degeneration" has become obsolete.

Therapeutic procedures: Obsolete are Burger-Allen exercises for arterial circulatory insufficiency of the legs, fever therapy, ultrasound in combination with topical oil of Wintergreen or topical steroid administration.

Specialty: **Psychiatry**
Procedures: No consensus by members.

Specialty: **Radiology**
Procedures:

Specialty: **Surgeons**
Procedure: In general agreement with the list by Blue Shield, with the qualification that under certain circumstances, some of the "obsolete Procedures" could be justified.

Specialty: **Urology**
Procedure: No general consensus.

For Your Convenience

Use this coupon for your TAX-DEDUCTIBLE CONTRIBUTION to the Missouri State Medical Foundation.

TO: MISSOURI STATE MEDICAL FOUNDATION
P.O. Box 1028, Jefferson City, Mo. 65102

I enclose my donation of $........ for the MSMF STUDENT LOAN FUND.
NAME
ADDRESS
....
....

Make Checks Payable to Missouri State Medical Foundation.

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 509(a)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

MEDICAL DEFENSE ASSOCIATES, LTD.
WE ARE NO. 1

Yes, we provide medical malpractice insurance coverage for more Missouri medical doctors than any other company in this state.

Because . . . . . . .We have lower rates generally.

Because . . . . . . .We require no additional donation or investment.

Because . . . . . . .We are not dependent on Standard Insurance Markets for expensive reinsurance.

Because . . . . . . .We consume less than 8% of premium in expenses, which is about one half the amount paid in commissions alone in a Stock Company.

Because . . . . . . .Independent thinking doctors would rather save money than be told they must make certain investments to qualify for insurance.

Because . . . . . . .The doctor's good sound practice of medicine is all that is necessary to qualify him for insurance with Medical Defense Associates, Ltd.

Yes, we're number one and you, Doctor, have made it so.

Call for Quote of our Low Rates.
1-800-492-7212
417-883-0199

or write:

Missouri Malpractice Managers, 1031 E. Battlefield, Suite 117-B
Springfield, Missouri 65807

Continuing Education Coming Events

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: **Alta Bingham**

May 17-18	Surgical Problems—Old and New
June 7-8	Symposium: Physical Fitness
Aug. 2-4	Symposium: Management of Medical Problems in Athletes (Four Seasons, Colorado Springs)

Missouri Chapter, American College of Surgeons
Box 1268, Columbia 65205
(314) 449-4518

June 22-23	Annual Professional Meeting (Alameda Plaza, Kansas City)

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: **Erich W. Pollak, M.D., F.A.C.S., Director of Surgical Education**

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds
First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds

Kansas City Society of Ophthalmology and Otolaryngology
30306 Gillham Rd., Kansas City 64108
(816) 531-8432
Contact: **Ron Cosens, Executive Director**

Dec. 6-7	Annual Clinical Meeting

Baptist Memorial Hospital
6601 Rockhill Rd., Kansas City 64131
(816) 361-3500 (Ext. 7230)
Contact: **Margery B. Hartsock, Director of Public Relations**

May 31	17th Annual Pediatric Seminar — Advances in Pediatrics

> *The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category 1 credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in* MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
Contact: **Loretta Giacoletto**

March-May	Internal Medicine Review (Weekly, day TBA) (Steinbert Auditorium, The Jewish Hospital)
May 31	Newborn Metabolic Problems
Aug. 6-8	Pediatric Neurology: Recent Advances in the Diagnosis and Treatment (Smuggler's Notch, Vermont)
Nov. 9-11	Sixth Annual Symposium: Anesthesia and the Geriatric Patient

St. Joseph Memorial Hospital
3rd Street and 1st Capital Dr.
St. Charles 63301
(314) 946-6811
Contact: **Gerald J. Duling, M.D., Medical Director**

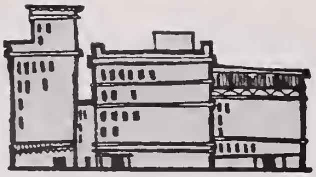
May 22	Pacemakers
May 24	Tumor Board
May 31	Tumor Board
June 7	Tumor Board
June 12	Peripheral Vascular Disease
June 14	Tumor Board
June 19	Pathologists' Seminar
June 21	Tumor Board
June 26	Intravenous Hyperalimentation
June 28	Tumor Board
July 5	Tumor Board

University of Missouri School of Medicine Office of Continuing Education
M-233 Medical Center, Columbia 65212
(314) 882-2256
Contact: **J. Regan Thomas, M.D., Section of Otolaryngology**

Aug. 9-10	Workshop in Soft Tissue Surgery

DePaul Community Health Center
12303 DePaul Dr., Bridgeton 63044
(314) 344-6000
Contact: **Medical Director's Office**

June 6	Gastrointestinal Education Program (DePaul Division Auditorium)



NEWS

From the Medical Schools

ST. LOUIS UNIVERSITY

Rev. O'Rourke

St. Louis University Medical Center will expand its efforts in addressing both ethical and moral issues through the establishment of a new Center for Health Care Ethics, effective July 1. Serving as director of the new Center will be the *Rev. Kevin D. O'Rourke*, O.P., who currently holds the position of vice-president of The Catholic Hospital Association.

The Center, which will seek affiliations with other institutions that deal with health care ethics, will develop a wide range of educational and research programs, including extensive continuing education offerings.

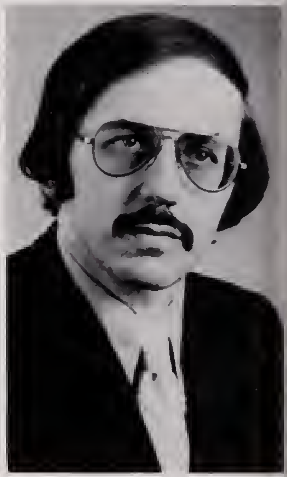
Concurrent with his appointment as director of the Center, Father O'Rourke has also accepted the position of professor of ethics on the faculty at the School of Medicine.

Father O'Rourke attended the University of Notre Dame as an undergraduate and received advanced degrees in theology and canon law at the Angelicum in Rome after joining the Dominican Order. He was ordained in 1954 and served as professor of canon law and moral theology at Aquinas Institute of Theology in Dubuque, Iowa. He also served as president of the Institute from 1968 until 1972.

In 1973, Father O'Rourke was appointed director of Medical Moral Affairs, The Catholic Hospital Association. In this position, he helped Catholic health care facilities face the practical ethical questions that arise in today's health care.

He is the author of numerous books and articles on ethical issues arising as a result of medical progress and human need. Among these is his most recent book, "Health Care Ethics: A Theological Analysis," which he coauthored with the Rev. Benedict M. Ashley, O.P.

In announcing the new Center and its director, George E. Thoma, M.D., vice-president for the Medical Center said, "We look forward to Father O'Rourke's work with the Medical Center. His broad knowledge and experience will certainly be an enhancement to our resources in this increasingly important area."



Mr. Coburn

Stephen Coburn, assistant vice-president for St. Louis University Medical Center, was elected president of the St. Louis Regional Maternal and Child Health Council.

Mr. Coburn was one of the organizers of the Council, which actively began operations in 1974. The Council is a consortium of major providers and consumers concerned with maternal and child health services in St. Louis City, as well as St. Louis, Franklin, Jefferson and St. Charles counties.

The Council is currently engaged in severa projects centering on development of new programs, coordination and integration of existing services and evaluation of care.

Mr. Coburn joined the Medical Center staff in 1971 as research associate in community medicine. He has served as assistant vice-president for the Medical Center since 1976.

UNIVERSITY OF MISSOURI-KANSAS CITY

The School of Medicine has recently received a contribution of $10,000 from the Devins Foundation of Kansas City to establish a revolving loan fund for the yearly student/faculty study tours.

In past years, students have traveled to China Israel and the Navajo Nation. This year the students plan to tour major medical facilities in N.E Canada. In funding past trips, students have held auctions, bake sales and various other activities to raise the needed money for students unable to provide their own support. This revolving loan fund will provide students with an excellen source of support to facilitate their participation in future study tours. In order to maintain and expand the fund, students will be expected to repay loans after they have completed their residency training.

John R. Hogness, M.D., president of the University of Washington, presented the 1979 Dorothy Lee Ross Distinguished Lecture on May 11 at the School of Medicine.

In previous years, *Alfred P. Fishman*, M.D., director of the Cardiology and Pulmonary Medicine Department at the Hospital of the University of Pennsylvania, and *Robert H. Ebert*, M.D., D. Phil., the past-president of Harvard Medical Center, presented this lectureship which is endowed by the W. W. Ross family of Kansas City.

Before assuming his present position, Dr. Hogness was president of the Institute of Medicine of the National Academy of Sciences. Eight years ago, he was the guest speaker at the inauguration ceremony of the School of Medicine.

Dr. Doris Gorka Bartuska was a visiting docent on April 25-27. Dr. Bartuska is from the Medical College of Pennsylvania and has devoted her career to thyroid research and genetics. She is a member of the American Society of Human Genetics and the Lawson Wilkins Society of Pediatric Endocrinology. She received the NIH Special Fellow in Molecular Medicine at the Medical College of Pennsylvania. Dr. Bartuska spoke on "Genetic Counseling in Family Practice" and participated in seminars and ward rounds.

The University of Missouri-Kansas City Chapter of the American Medical Student Association will host the Region-8 Spring Workshop. The workshop is an annual event which brings together several representatives from each of the medical schools in Missouri, Kansas, Iowa, Nebraska, Minnesota, North Dakota and South Dakota for a weekend of educational sessions relating to both AMSA and non-AMSA matters.

UNIVERSITY OF MISSOURI-COLUMBIA

Dr. Charles R. Peterson, chairman of the department of physical medicine and rehabilitation, has been awarded a World Rehabilitation Fund Fellowship that will enable him to spend two months studying the treatment of spinal cord injury (SCI) patients in England.

The emergency transport of SCI patients will be the focus of Dr. Peterson's attention in London. He also will interview patients concerning their placement in vocational rehabilitation jobs.

At the Stokes-Mandeville Spinal Cord Center 40 miles north of London, he will see more patients and be there in July when the Wheelchair Olympic Games are held.

Dr. Howard A. Rusk, a graduate of the University of Missouri known as "the father of rehabilitation medicine," is chairman of the board of directors of the World Rehabilitation Fund. He will be in Columbia in May to be the speaker for his Class of 1923 reunion and also to speak to the graduates in physical therapy. He will meet with the Friends of Rusk (Rehabilitation Center) advisory board and will receive an honorary degree from Columbia College.

J. Otto Lottes, M.D., a St. Louis orthopedic surgeon, is the 22nd recipient of the Citation of Merit award for medicine given by the University of Missouri-Columbia Alumni Association. Presentation of the award was made during the annual meeting of the Missouri State Medical Association at the UMC medical alumni luncheon in St. Louis on April 20.

A 1935 graduate of the two-year medical school (it became a four-year program in 1956), Dr. Lottes conceived the idea of developing a nail suitable for a fractured tibia and first used the "Lottes Nail" in 1947 when he was chief orthopedic resident at Barnes Hospital in St. Louis. Today, the nail is used extensively for fractures not only of the tibia, but the femur, ulnar, radius and humerus (arm and leg bones).

Dr. Lottes has lectured and performed operations in many hospitals around the world. He also has published his research work on bone grafts and the use of skin for tendon transplants.

Dr. Lottes has served as president of Lutheran Hospital and St. Anthony's Hospital medical staffs and has been president of the St. Louis Medical Society and the St. Louis Orthopedic Society. He has served on the Committee for Trauma of the American Academy of Orthopedic Surgery for six years and is an instructor for the Academy. He is a life member of the American College of Surgeons and a member of several other professional societies.

The School of Medicine held its Spring Honors and Awards Convocation on April 14. Dr. Richard Hong, professor of pediatrics at the University of Wisconsin, was the guest speaker. Dr. Hong also participated in a symposium on "Transplantation: Science and Ethics" with Drs. Ted Groshong, Malek-Ahmadi, Frederick Whittier, Dan Winship and Dean Charles Lobeck.

Something Missing?

Keeping Patients Comfortable..

When your patient i
most relaxed . . . yo
are most effective

Patient comfort, along with you
comfort, are prime consideration
in this examination table

Places patients in the position
best for your work, with least discomfort for you.

Whether you are setting up your first office, or are read
to re-equip . . . whether you lease or buy, with time plan
available . . . let Goetze-Niemer's helpful professional
work with you.

GOETZE-NIEMER CO

- P.O. Box 136—1701 Brooklyn
  Kansas City, MO 64141
  Phone: 816-231-1900
- P.O. Box 187—211 No. 8th
  St. Joseph, MO 64502
  Phone: 816-279-0804
- 2611 West Mill St.
  Springfield, MO 65802
  Phone: 417-865-6511
- Frisco Building
  Joplin, MO 64801
  Phone: 417-624-1040

HOSPITAL AND SURGICAL SUPPLIES—SINCE 1884

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

Since 1899

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Bargmann and Philip E. Moppert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
Suite 202-A, 6600 W. 95th Street, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

Component Society News

FIRST DISTRICT

COUNCILOR
RICHARD C. HEDGES, M.D., ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

The April 4 meeting of the Buchanan County Medical Society followed a dinner at the Hoof & Horn Steak House.

During the business session, the members oted to endorse the two-hospital concept for the ommunity. This includes the building of a new tructure for St. Joseph Hospital.

The Society customarily has a cancer program t its April meeting during Cancer Control Month. The speaker at the scientific session was Dr. Ben Papermaster, scientific director of the Cancer Research Center in Columbia. His subject was "Lung Cancer Detection."

Dr. Carl K. Ness, president, presided at the meeting. Dr. James J. McMillen introduced the peaker.

ROBERT R. STUBER, M.D., *Secretary*

FIFTH DISTRICT

COUNCILOR
H. PETER EKERN, M.D., MEXICO

LAKE OF THE OZARKS MEDICAL SOCIETY

The fourth meeting of the Lake of the Ozarks Medical Society was held at the Lake of the Ozarks General Hospital on April 16.

Members present were Chris K. Fotopolous, M.D., James Coy, M.D., Henry D. Petry, D.O., Carol Ewing, D.O., Ruth Kauffman, M.D., Otis Moseley, M.D., Jack Gunn, M.D., Charles Hall, M.D., Donald B. Holley, M.D., Kenneth Ridgeway, D.O., Loren Washburn, M.D., Norbert L. Kirk, D.O., M. R. Hayden, M.D. and T. W. Garrison, M.D. Mr. Bill Mitchell was a guest.

The guest speaker was Dr. John Bower of the University of Missouri-Columbia, who was sponsored by Mr. Gary Sparks. His topic was "Hypertension."

(Continued on page 296)

WHY SHOULD A PHYSICIAN BE CONCERNED ABOUT HOSPITAL MANAGEMENT?

Because we think it affects your patient's care.

Employee confidence in hospital management improves morale and attitude: two major prescriptions in the care your patients receive.

Shared Service Systems, a non-profit organization of over 90 health care institutions in the Midwest, can provide complete management for your facility including a highly trained administrator and back-up support if and when required.

At Shared Service Systems, our management philosophy is to provide effective modern management to your hospital so that your patients will continue to receive local, cost effective health services.

We thought you should know about us.

for more information
contact

SHARED SERVICE SYSTEMS
1725 So. 20th Street
Omaha, Nebraska 68108
or Phone: (402) 346-9008

New Members

Atta U. Butt, M.D., Suite 11, 751 E. 63rd, Kansas City 64110, has become a member of Jackson County Medical Society. Dr. Butt is a native of India, received his preliminary education at S. P. College and his M.D. degree at Madras Medical College in 1964. He specializes in psychiatry.

Dan J. Borello, M.D., 3115 McClelland, Joplin 64801, has become a member of the Jasper County Medical Society. Dr. Borello is a native of Pittsburg, Kan., received his preliminary education at Kansas State College and his M.D. degree at the University of Kansas in 1974. He specializes in obstetrics and gynecology.

Carl H. Calman, M.D., 819 Locust, St. Louis 63111, has become a member of St. Louis Metropolitan Medical Society. Dr. Calman is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1950. He specializes in surgery.

Alexander Carli, M.D., 800 E. 5th, Washington 63090, has become a member of Franklin-Gasconade-Warren County Medical Society. Dr. Carli is a native of France, received his preliminary education at the University of Marseille and his M.D. degree at the University of Marseille in 1969. He specializes in surgery.

John Anthony Crouch, M.D., 401 Keene, Columbia 65201, has become a member of Boone County Medical Society. Dr. Crouch is a native of Independence, received his preliminary education at Kansas State University and his M.D. degree at the University of Kansas in 1972. He specializes in thoracic and cardiovascular surgery.

John S. Daniels, M.D., 1441 Chandellay, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Daniels is a native of Ft. Smith, Ark., received his preliminary education at Washington University and his M.D. degree at the University of Arkansas in 1974. He specializes in internal medicine.

V. Deshpande, M.D., 716 Hanley Industrial Court, St. Louis 63144, has become a member of St. Louis Metropolitan Medical Society. Dr. Deshpande is a native of India. He received his M.D. degree at Byramjee Jeejeebhoy Medical College in 1968. He specializes in pathology.

(Continued on page 295)

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG *Pfizer*
A division of Pfizer Pharmaceuticals
New York, New York 10017

When you're good people recognize you.

Highly effective
Single-dose convenience
Non-staining
Economical
Pleasant tasting

Antiminth®
(pyrantel pamoate)
equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION

a drug of choice in pinworm infections

Please see brief summary of prescribing information on facing page.

©1977 LONE RANGER T.V., INC.

ALDOMET®
(METHYLDOPA | MSD)
TABLETS: 500 mg, 250 mg, and 125 mg
MSD
MERCK
SHARP &
DOHME

May & June, 1979 Meetings

May 2–3	**Connecticut State Medical Society** Hartford Hilton Hotel Hartford, Connecticut
May 2–5	**Medical & Chirurgical Faculty of the State of Maryland** Hunt Valley Inn Hunt Valley, Md.
May 3–5	**Oklahoma State Medical Association** Williams Center Tulsa, Oklahoma
May 3–6	**Texas Medical Association** Dallas, Texas
May 3–6	**Kansas Medical Society** Holiday Inn-Holidome Hutchinson, Kansas
May 3–6	**North Carolina Medical Society** Pinehurst Hotel Pinehurst, North Carolina
May 4–6	**Michigan State Medical Society** (House of Delegates) Kalamazoo Center Inn Kalamazoo, Michigan
May 6–10	**Mississippi State Medical Assoc.** Biloxi Hilton Biloxi, Mississippi
May 10–12	**Wisconsin State Medical Society** Marc Plaza Milwaukee, Wisconsin
May 16th	**Rhode Island Medical Society** Biltmore Plaza Hotel Providence, Rhode Island
May 17–18	**Minnesota Medical Association** St. Paul, Minnesota
May 23–27	**Florida Medical Association** The Diplomat Hotel Hollywood, Florida
June 6–8	**Alaska State Medical Association** Shee Atika Sitka, Alaska
June 7–10	**South Dakota State Medical Assoc.** Howard Johnson Rapid City, South Dakota
June 16–19	**Maine Medical Association** Samoset Resorts Rockport, Maine
June 18–20	**Iowa Medical Society** Tan-Tar-A Resort Osage Beach, Missouri
June 27	**Chicago Medical Society** (Annual Business Meeting & Inauguration) Starlight Inn Schiller Park, Illinois

ew Members

Continued from page 294)

Stanley Dratler, M.D., 7225 Clayton Rd., St. ouis 63105, has become a member of St. Louis letropolitan Medical Society. Dr. Dratler is a ative of Bronx, N. Y., received his preliminary ducation at Boston University and his M.D. deree at the University of Bologna in 1977. He pecializes in obstetrics and gynecology.

Dante Ocampo Garrido, M.D., 315 N. Tenth, t. Joseph 64506, has become a member of uchanan County Medical Society. Dr. Garrido a native of the Philippines, received his preminary education at the University of Santo omas and his M.D. degree at the University of antoTomas in 1971. He specializes in neurology.

Jack Goldman, M.D., 701 Manchester Rd., lanchester 63011, has become a member of St. ouis Metropolitan Medical Society. Dr. oldman is a native of Winnipeg, Canada, reeived his preliminary education at the Univerity of Manitoba and his M.D. degree at the Uniersity of Manitoba in 1972. He specializes in nternal medicine.

Walt W. Grote, M.D., Star Rt. 1, Leopold 3760, has become a member of Cape Girardeau ounty Medical Society. Dr. Grote is a native of orpus Christi, Tex., received his preliminary ducation at Texas A&M University and his M.D. egree at the University of Texas in 1972. He pecializes in anesthesiology.

Terry S. Hoyt, M.D., 1012 Maplewood Dr., olumbia 65201, has become a member of Boone ounty Medical Society. Dr. Hoyt is a native of ickinson, N. D., received his preliminary eduation at the Massachusetts Institute of Technolgy and his M.D. degree at the University of Utah n 1970. He specializes in radiology and nuclear edicine.

Johnny E. Johnson, Jr., M.D., 7286 #6 orstead Walk, St. Louis 63121, has become a ember of St. Louis Metropolitan Medical Society. Dr. Johnson is a native of Berkley, W. Va., eceived his preliminary education at Marshall niversity and his M.D. degree at Meharry ledical College in 1975. He specializes in obstetics and gynecology.

Robert Sherman Jones, M.D., 803 Stadium d., Columbia 65201, has become a member of oone County Medical Society. Dr. Jones is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri in 1965. He specializes in psychiatry.

Charles R. Kelley, M.D., St. Luke's Hospital, 44th and Wornall, Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Kelley is a native of Topeka, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1964. He specializes in physical medicine and rehabilitation.

Ali Kholeif, M.D., 3624 Pashall Rd., St. Louis 63135, has become a member of St. Louis Metropolitan Medical Society. Dr. Kholeif is a native of Egypt, received his preliminary education at Cairo University and his M.D. degree at Cairo University in 1962. He specializes in anesthesiology.

Vellore R. Kirubakaran, M.D., 923 Powell, St. Joseph 64501, has become a member of Buchanan County Medical Society. Dr. Kirubakaran is a native of India, received his preliminary education at Bangalore Medical College and his M.D. degree at Bangalore Medical College in 1967. He specializes in psychiatry.

James Glennon Langan, M.D., 9948 Heritage Dr., Apt. A, St. Louis 63123, has become a member of St. Louis Metropolitan Medical Society. Dr. Langan is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri in 1972. He specializes in internal medicine.

Daniel Herbert Lischwe, M.D., 649 S. New Ballas, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Lischwe is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1977. He specializes in family practice.

Jose O. Menendez, M.D., 1505 W. Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Menendez is a native of Cuba, received his preliminary education at the Instituto del Vedado and his M.D. degree at Havana Medical College in 1954. He specializes in psychiatry.

William Robert Meredith, Jr., M.D., 2727 McClelland, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Meredith is a native of Charleston, W. Va., received his preliminary education at the University of Arkansas and his M.D. degree at the University of Arkansas in 1975. He specializes in ophthalmology.

Judith Helen Miles, M.D., Dept. of Child Health, University of Missouri Medical Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Miles is a native of New York, N. Y., received her preliminary education at Mount Holyoke College and her M.D. degree at the University of Missouri in 1975. She specializes in pediatrics.

Barbara Monsees, M.D., 7823 Ravensridge Dr., Shrewsbury 63119, has become a member of St. Louis Metropolitan Medical Society. Dr. Monsees is a native of New York, N. Y., received her preliminary education at Brandeis University and her M.D. degree at Washington University in 1975. She specializes in radiology.

Willy J. C. Morgan, M.D., 4601 State St., East St. Louis, Ill. 62205, has become a member of St. Louis Metropolitan Medical Society. Dr. Morgan is a native of the West Indies, received his preliminary education at Petit Seminaire College and his M.D. degree at the University of Haiti in 1962. He specializes in urology.

D. Glenn Pennington, M.D., St. Louis University School of Medicine, 1325 S. Grand, St. Louis 63104, has become a member of St. Loui Metropolitan Medical Society. Dr. Pennington i a native of Meridian, Miss., received his preliminary education at the University of Mississipp and his M.D. degree at the University of Mississippi in 1966. He specializes in surgery.

Douglas M. Rope, M.D., 373 W. 101st Terr. Kansas City 64114, has become a member o Jackson County Medical Society. Dr. Rope is native of Kansas City, received his preliminar education at the University of Texas and his M.D degree at the University of Kansas in 1975. H specializes in internal medicine.

Michael E. Ryan, M.D., 620 Medical Plaza 4320 Wornall Rd., Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Ryan is a native of Joplin, received hi preliminary education at the University of Kansa and his M.D. degree at the University of Kansa in 1972. He specializes in neurology.

Georg Christian Schultz, M.D., 121 E. Rodney, Cape Girardeau 63701, has become member of Cape Girardeau County Medical Society. Dr. Schultz is a native of Moline, Ill., received his preliminary education at the University of North Dakota and his M.D. degree at th University of West Virginia in 1971. H specializes in pediatrics.

Joseph R. Swartwout, M.D., 373 W. 101s Terr., Kansas City 64114, has become a membe of Jackson County Medical Society. Dr. Swartwout is a native of Pascagoula, Miss., received hi preliminary education at Tulane University an his M.D. degree at Tulane University in 1951. H specializes in obstetrics and gynecology.

Ernest Tillman, M.D., 800 N. Lindbergh, St Louis 63141, has become a member of St. Loui Metropolitan Medical Society. Dr. Tillman is native of Baltimore, Md., received his preliminary education at Temple University and hi M.D. degree at Hahnemann Medical College i 1956. He specializes in occupational medicine.

Michael C. Trueblood, M.D., 2327 Belleridge, Cape Girardeau 63701, has become member of Cape Girardeau County Medical Society. Dr. Trueblood is a native of St. Louis received his preliminary education at DePau University and his M.D. degree at Vanderbil University in 1973. He specializes in orthopedi surgery.

County Society News

(Continued from page 293)

President Fotopolous called the meeting to order. The minutes of the previous meeting were read and approved.

It was announced that two continuing medical education courses will be offered locally. A Cardiovascular Conference will be held on May 4-6 at the Lodge of the Four Seasons. A Perinatal Conference will be held on May 9 at the Holiday Inn.

Dr. Coy and Dr. Garrison reported that they are preparing a program on cardiopulmonary resuscitation for October or November.

Dr. Mitchell announced that the hospital fund-raising golf tournament will be held on June 19.

The next meeting of the Society will be held on the third Monday in September.

M. R. Hayden, M.D., *Secretary*

INDEX TO ADVERTISERS

They Help Make MISSOURI MEDICINE *Possible*

etna Life & Casualty 280
eltone Electronics 257
urroughs Wellcome .. Insert (246-247), Insert (254-255)
oetz-Niemer Co. 292
lempel Financial Corporation 247
red S. James & Co. of Missouri, Inc. 282
li Lilly & Company 258
lead Johnson Pharmaceutical Division . Insert (254-255)
ledical Defense Associates 288
ledical Protective Company 292
lerck Sharp & Dohme .... Insert (294-295)
Merrell-National Laboratories
...... 246, Insert (246-247), Insert (254-255), 255, 256
MOMEDICO 242
Munns Medical Supply 279
Pharmaceutical Manufacturers Association 284-285
Roche Laboratories ..... 243, Insert (254-255), 299, 300
Roerig .... 294, Insert (294-295)
Saint Louis Blue Shield 254
Shared Service Systems 293
Smith Kline & French .... Insert (246-247)
The Upjohn Company .... Insert (246-247)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

SPEN MUSHROOM CONFERENCE — Identification of dible, poisonous and hallucinogenic mushrooms. Treatment of mushroom poisoning. Microscopy. Novice and adanced courses. AMA Category I. July 29-August 3, 1979. Vildwood Inn, Snowmass-at-Aspen, Colorado. Contact: eth Israel Hospital, 1601 Lowell Blvd., Denver, CO 80204. 303) 825-2190, Ext. 550.

OR SALE — Physician's 430-acre estate, Cuba, Mo. Will ivide. Will finance. One-of-a-kind rustic 4-bedroom home, -bedroom caretaker's cabin, lighted tennis court, heated ool, private airstrip, all native game, fish to 20 lb, 90% mbered, ¾ mile to championship golf course, 80 miles to t. Louis via I44. Many extras. Packaged for maximum personal privacy, pleasure, comfort and convenience. Shown by ppointment only. Phone (314) 885-2311.

T. LOUIS: EMERGENCY MEDICINE — Work available Ionday-Friday days only; full time or part time; paid professional liability; flexible schedule; Missouri license required. all PPG's Laury Kamp at 314-878-2280.

PHYSICIANS WANTED FOR ST. CHARLES COUNTY — Hybrid primary care emergency medicine opportunity in new health care facility. Walk-up, after-hours clinic and first aid facility in western St. Charles County as alternative to Emergency Department utilization. Evening and weekend. May alternate with Emergency Department position at St. Joseph Hospital. Excellent compensation. Contact Gerald J. Duling, M.D., Medical Director, St. Joseph Hospital, St. Charles, Mo. 63301. (314) 946-6811.

PSYCHIATRIST — Board certified or eligible psychiatrist, Correctional Institution Hospital setting at U.S. Bureau of Prisons, Medical Center for Federal Prisoners, 300-bed psychiatric services. Office of Personal Management benefits and retirement — Salary up to $47,500 depending on qualifications. Excellent schools and recreation area. U.S. citizenship. May be licensed in any state, Territory of the United States or District of Columbia. Population over 100,000. Contact Personnel Officer, U.S. Medical Center for Federal Prisoners, Springfield, MO 65802. PH (417) 862-7041. Qualified applicants will receive consideration for appointment without regard to race, creed, color, national origin, sex, political affiliation or any other nonmerit factor.

FAMILY PRACTICE — Solo Board Certified family practitioner is seeking a family practice associate in growing community 6 miles north of Kansas City International Airport. Contact, Carl M. Myers, M.D., Platte Medical Clinic, Platte City, Mo. 64079. (816) 431-2200.

WANTED — Used surgical, medical equipment in good condition or hospital surplus. Private party. Write: 12128 Hibler Dr., Creve Coeur, Mo. 63141.

WANTED — Used (1) x-ray and Fluro at least 500 m.a.p., (2) hydrolic operating table, (3) anesthesia machine. Equipment should be in good working condition. Private party. Write: 12128 Hibler Dr., Creve Coeur, Mo. 63141.

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

Dr. Franklin E. Walton, St. Louis, was appointed assistant dean of the Washington University School of Medicine on January 28. Dr. Walton was graduated from the Washington University School of Medicine in 1927, served on the resident surgical staff of Barnes Hospital for three years and was resident surgeon for two years.

Dr. Cyrus E. Burford, St. Louis, was elected president-elect of the Missouri State Medical Association by the House of Delegates at the Excelsior Springs session on April 10-12. He will be installed as president at the Joplin session in 1940.

Dr. Burford received his preliminary education at Central College in Fayette, obtaining a Ph.B. degree. An honorary LL.D. was later bestowed upon him by that school. He is now chairman of the Board of Curators at Central College. Dr. Burford received his medical degree in 1902, the year following the union of the Marion-Sims College of Medicine and the Beaumont Hospital Medical College to form the Marion-Sims-Beaumont Medical College. It was also the year before the school became the St. Louis University School of Medicine.

TWENTY-FIVE YEARS AGO

Pat Dyer, M.D. and A. J. Campbell, M.D. of Sedalia were honored at a dinner meeting in celebration of their completion of 50 years in the practice of medicine. Dr. M. Pinson Neal of the University of Missouri and Dr. Roland Kieffer of St. Louis were the speakers of the evening and were selected by the two honorees.

Plans for the 50th Anniversary Celebration of the Buchanan County Medical Society on June 2 are being completed. Honored guests will include Dr. H. E. Peterson, president of the MSMA, and four living charter members. They are Drs. John M. Bell, Thomas M. Paul, W. E. Pentz and Floyd Spencer.

Dr. Howard Rusk, M.D., New York, writes:

"The situation in Korea can be better understood if its problems are projected onto any Missouri city of 25,000, such as Jefferson City, Webster Groves or Cape Girardeau. Demolish one fourth of the houses and unroof and damage another fourth.

"In this city, there are 1,250 people with tuberculosis of whom 300 are acutely ill. Ninety per cent of the population is infected with intestinal parasites. Several scores of persons have leprosy or are blind. Everyone is hungry on 1,800 calorie diets and they are cold in the winter when there is only fuel enough for essential cooking.

"To meet all the medical needs of these poor unfortunates, there is only one poorly trained medical practitioner. Add to these conditions fear, anxiety, despair and you have the health picture of Korea today."

Dr. Rusk, a native of Brookfield, is a graduate of the University of Missouri and was in practice in St. Louis until 1942 when he entered the Army Air Force. During the war, he originated and directed the AKF Convalescent Rehabilitation Program for which he received the Distinguished Service Medal. Since the end of the war, he has been professor and chairman, Department of Physical Medicine and Rehabilitation, New York University College of Medicine and an associate editor of *The New York Times*.

TEN YEARS AGO

It was 40 years age that the Beaumont Hospital College of Medicine became the St. Louis University School of Medicine. The St. Louis Medical College and the Missouri Medical College became the Washington University School of Medicine.

Dr. Vallee L. Willman, professor of surgery and vice-chairman of the department at the St. Louis University School of Medicine, has been named chairman of the Department of Surgery effective Aug. 1, 1969. He was a member of the surgery team which performed the first open heart operation in the St. Louis area at the St. Louis University Hospital in 1956. Dr. Willman will succeed Dr. C. Rollins Hanlon, who has been named director of the American College of Surgeons.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

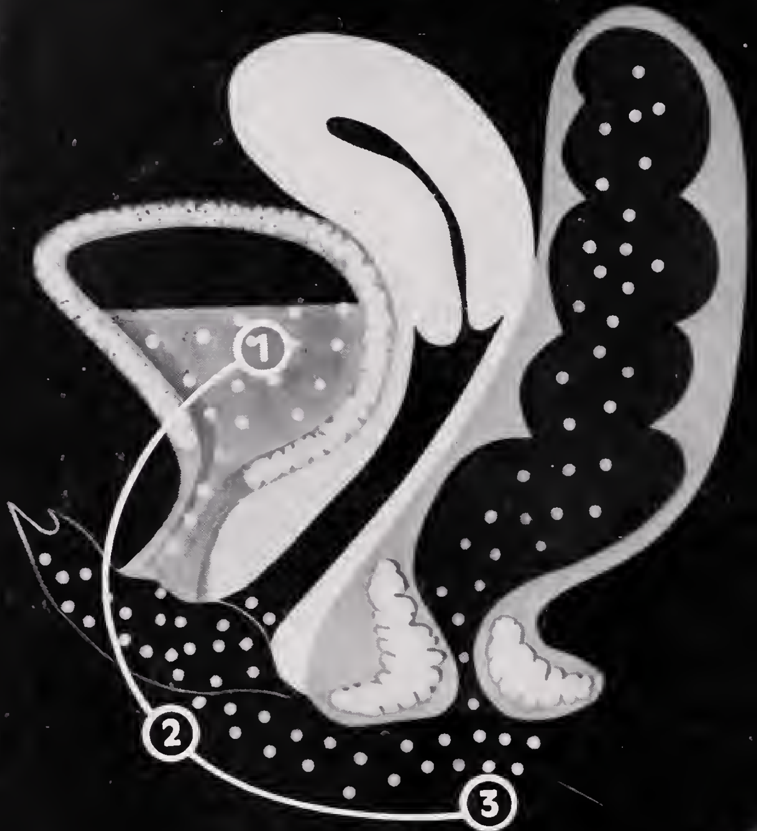
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see back cover.

9 South 22nd St.
hiladelphia, PA 19103

Her next attack of cystitis may require

the Bactrim™ 3-system counterattac



ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Ente bacteriaceae* in the bowel without the emergence of re tant organisms. Thus, Bactrim reduces the risk of intr colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal trac

Please see reverse side for summary of product information.

Missouri Medicine

Vol. 76, No. 6 (ISSN 0026-6620) June, 1979

MDS

Multiple Unusual Pulmonary Nodules

Thrombotic Thrombocytopenic Purpura

MSMA News Round-Up

Editor's Corner

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA
28 1979

Cutaneous Protrusion of a Sliding Compression Screw

Malignancies of the Nasal Fossa

MISSOURI STATE MEDICAL ASSOCIATION

Contents Page 307

There's more to malpractice insurance than just being covered. Momedico® has a better way.

Your present professional liability insurance probably covers you for everything you can think of. But think of what more your insurance company should do for you. Special needs you may have, lower premiums on your policy, service and assistance as well as coverage. And a voice in setting company policies and direction. That's why Momedico has a better way.

Doctors in the insurance business.

Today, more than 80,000 physicians in the United States carry professional liability protection through their own insurance companies. There are 19 such companies sponsored by state or local medical societies. More than 40 doctor-owned companies and trusts are either operational or on the drawing boards.

Formed by Missouri doctors, for Missouri doctors.

Here at home, physicians found adequate insurance protection lacking. And so, Momedico was formed by the Missouri State Medical Association. This stock insurance company is licensed and regulated the same as all other stock insurance companies in Missouri. In unity there is strength, and nowhere can you find more strength in your protection than in this doctor-directed company. All are fellow physicians.

Lower premiums. More flexible coverage.

Everyone promises low premiums. Momedico delivers on that promise because our operating expenses are lower than commercial insurers. We don't have to pay stockholders who are interested in profit, not protection. We can design a policy to meet your needs, your practice. Our unique status directly benefits you. If the premiums we collect are more than is needed, they can be returned to you through a participating provision. One more benefit: you pay no deductible.

And still your money earns.

All insurance companies must establish substantial reserves. Momedico is no exception. It's what we do with the earnings on this money that makes Momedico a better way. The invested earnings accrue to your benefit, and every other doctor who is a member of the company. Commercial insurance companies retain these earnings for their benefit. Not Momedico.

The best defense is a good lawyer.

Nobody wants to end up in court. If you do, you'll be glad Momedico is behind you. We'll do everything proper and possible to protect your interests. We have retained the top-rated claims attorneys who work for some of the country's largest insurance companies. We'll also help provide the best expert witness assistance. By joining Momedico, you can help keep closer control of claims settlements. And you don't pay hidden legal fees.

Strong and growing.

All of our policy contracts are backed by prominent American insurance companies that specialize in medical underwriting. The company is financially healthy, and structured to maintain that health along with growth. In the short time since Momedico was created by the Missouri State Medical Association, over six hundred physicians have become policyholders. And more join every day.

John N. Martin, M.D. President, Missouri State Medical Assoc.

"As a fellow physician, and a policyholder of Momedico, I enthusiastically endorse this professional liability program. It has been designed by doctors, for doctors. I invite you to learn more about this protection from Momedico."

Mail this coupon today. Find out why Momedico and the Missouri State Medical Assoc. have a better way to protect you.

Yes, I would like to know more about professional liability insurance with Momedico.

MOMEDICO®
Better Protection. Together.
Sponsored by the Missouri State Medical Association

☐ Have your agent call me. ☐ Send me more information, please.

NAME __________
ADDRESS __________
CITY/RFD __________
ZIP __________ PHONE # __________

Mail to:
Momedico, 100 North Broadway, St. Louis, MO 63102 or call (314) 241-4774

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage p
Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Associa
113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year, Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fu
Missouri.

LIBRIUM®
10 ROCHE
IUM®
ROCHE

PERFORMANCE. PROVEN EFFECTIVENESS WITHIN A WIDE SAFETY MARGIN.

While Roche Laboratories already knows more about the performance of Librium than anyone else, we keep on learning every day.

For example, the highly favorable benefits-to-risk ratio of Librium is a well-documented matter of record.

And, of course, the specific calming action of Librium has been demonstrated in millions of patients around the world. In a large number of these patients, Librium was used concomitantly with other primary medications.

Proven performance within a wide safety margin. Basically, that's what Librium is all about.

LIBRIUM® ©IV

chlordiazepoxide HCl/Roche

THE ANXIETY-SPECIFIC

efore prescribing, please consult complete roduct information, a summary of which folws:

dications: Relief of anxiety and tension occurng alone or accompanying various disease ates. Efficacy beyond four months not establshed by systematic clinical studies. Periodic eassessment of therapy recommended.

ontraindications: Patients with known hypernsitivity to the drug.

arnings: Warn patients that mental and/or hysical abilities required for tasks such as drivg or operating machinery may be impaired, as ay be mental alertness in children, and that oncomitant use with alcohol or CNS deressants may have an additive effect. Though hysical and psychological dependence have rely been reported on recommended doses, se caution in administering to addiction-prone dividuals or those who might increase dosage; ithdrawal symptoms (including convulsions), llowing discontinuation of the drug and similar those seen with barbiturates, have been reorted.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.,* excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

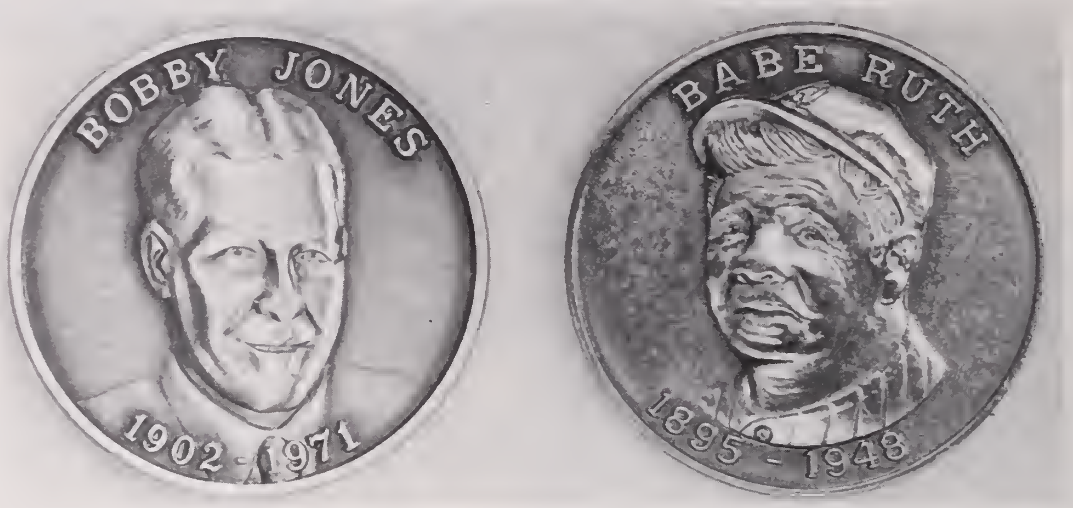
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

ROCHE

Roche Products Inc.
Manati, Puerto Rico 00701

DO YOU REMEMBER THESE TWO GREATS?



THIS PAIR OF BRONZE MEDALLIONS WITH RAISED FIGURES OF BOBBY JONES AND BABE RUTH CAN BE YOURS IN EXCHANGE FOR FIVE MINUTES.

SEND A LIST OF YOUR ANTICIPATED MEDICAL EQUIPMEN NEEDS FOR YOUR OFFICE FOR 1979 TO JOE SHERMAN ,
501 GAGE BLVD. TOPEKA, KANSAS, 66601.

YOUR MUNNS REPRESENTATIVE WILL DELIVER TO YOU YOUR SET OF MEDALLIONS....IT'S THAT EASY.

THIS OFFER EXPIRES JUNE 30, 1979, AND QUANTITIES ARE LIMITED SO DON'T DELAY!

MUNNS
MEDICAL
SUPPLY

MSMA

MISSOURI STATE MEDICAL ASSOCIATION

NEWS ROUND - UP

June, 1979

Good Samaritan bill passes both houses

The 1979 Missouri General Assembly comes to a close on June 15. As it stands to date, some of the results of this year's session look good for the medical profession.

The "Good Samaritan" law which many physicians have said is necessary for protection in emergency situations, has passed both houses. The House accepted a Senate amendment which adds Registered Nurses to the bill. The bill must now be signed by the Governor to take effect.

The piece of legislation attracting much interest from the medical profession is Senate Substitute for SB 293, the Family Practice Residency bill.

This legislation has progressed further this session than ever before. It has passed the Senate and has been reported Do Pass by the House Public Health Committee.

However, this is not the same bill that was introduced. It, like nearly all legislation, is a compromise bill that incorporates the wishes of many groups and especially the bill's sponsor. Still, it is a beginning for a state-funded system of Family Practice Residency Programs.

In other important areas, this has been a successful session to date. No "bad" legislation has been enacted. The annual attempts to broaden the scope of chiropractic, legalize laetrile and license allied health personnel have been headed off again.

In addition, the only Certificate-of-Need bill still alive does not include physician's offices in its provisions. This is becoming a tougher fight since more states and the Federal Government are moving in that direction.

The House voted a majority, but not the required 82 votes, for the "Definition of Death" bill and it was defeated. An 11th hour decision to oppose the bill by the Missouri Catholic Conference proved too much to overcome.

Several bills of interest to medicine still have at least a chance of passage this Session.

SB 241 would clarify the difference between advertising and solicitation in the Medical Practice Act.

SB 423 is an attempt to rewrite language in the statutes which makes it difficult for physicians to commit mentally ill patients.

SB 328 establishes a new and needed method of regulation of nursing homes in the state. At present, it contains a section on fraud and abuse in the Medicaid program which threatens physician-patient confidentiality.

HB 88 would allow Medicaid providers to have a hearing if their claims are denied or reduced.

HB 182 would establish a state-funded hemophilia program.

HB 220, et al, would license HMO's and place them under certain regulations of the State Insurance Division. This bill also contains provisions dealing with a premium tax on the Blues.

HB 421 would add a lay member to the Board of Registration for the Healing Arts. The bill also adds lay persons to all licensing boards.

There are two bills, SB 125 and HB 104, et al, which deal with the services provided under Medicaid. SB 125 started as a revision bill to correct language in present statutes. HB 104 is a combination of five House bills dealing with various providers.

As now written, both bills call for reimbursement for nurses services without supervision of physicians. Originally the nurses stated that this was needed because county health clinics could not be paid for services carried out by nurses. The Division of Family Services has rewritten its rules to provide such payment to the clinics.

AMPAC makes independent expenditures on behalf of candidates

Of the candidates that American Medical Political Action Committee (AMPAC) supported for 1978 elections, 74.7% were successful. AMPAC supported 415 candidates, 367 for the U.S. House of Representatives and 48 for the U.S. Senate.

For the first time, AMPAC made independent expenditures on behalf of candidates. AMPAC supported 16 House candidates and one Senate candidate through one page ads in national magazines. In addition, AMPAC supported ten candidates by supplying county committees of the candidate's party with campaign buttons for distribution before the election.

This was AMPAC's first venture in this kind of expenditure. Some political experts feel that independent expenditures may be the wave of the future for political action committees and groups who support federal candidates.

Appointments made to Federation of State Medical Boards

The president of the Federation of State Medical Boards, Dr. George Palmer, recently announced several appointments which give recognition to the Missouri State Board of Registration for the Healing Arts.

Dr. James M. Whittico, of St. Louis, a member of the State Board, was appointed to the Constitution and Bylaws Committee of the Federation. This appointment is significant because this year the Committee has been charged with reviewing and revising the Federation's Constitution and Bylaws. In addition, this is the first time a member of the Missouri Board has been named to a standing committee of the Federation.

Dr. Palmer also announced that Gary Clark, Executive Secretary for the State Board of Healing Arts, will become the "executive consultant" to the Board of Directors of the Federation. This marks the first time the Federation has given this kind of recognition to an executive officer.

Funds needed to sponsor students

Funds are needed to encourage medical student interest in organized medicine!

At the 1978 Interim Session, members of the MSMA House of Delegates recognized the importance of involving students in the association because the future of the organization and the profession lies in the medical students of today.

The House agreed that the sooner students become aware of what the MSMA does, the sooner they will be interested in becoming a part of organized medicine.

A fund was set up to sponsor medical students to MSMA House of Delegates meeting and a few members made contributions to bring students to the 1979 Annual Session in St. Louis.

However, more donations are needed. If every member of the MSMA gave just a few dollars to the fund, every student who wanted to attend a MSMA session could be sponsored.

If you wish to make a contribution to the MSMA Student Fund, please send it to: MSMA, P.O. Box 1028, Jefferson City, Mo. 65102.

Polio alert in Missouri

Poliomyelitis with type I virus is occurring among Amish people in Pennsylvania and Ontario and highly suspect cases are under surveillance in other states. These people frequently travel to visit Amish in other states, and, therefore, the Center for Disease Control and Missouri Division of Health consider all Amish to be at very high risk of contact with polio virus.

With the help of community health nurses, all Missouri Amish communities are being contacted and strongly urged to accept trivalent oral polio vaccine.

In order to increase the likelihood of detecting polio if it occurs in Missouri, it is requested that stool specimens for virus isolation and paired sera be submitted on all suspect cases including aseptic meningitis. The nearest county or district health unit will have detailed information regarding obtaining these specimens and proper handling.

1979 MMPAC SUSTAINING MEMBERS

The MSMA members and Auxiliary members who have paid $100 to become Sustaining Members of the Missouri Medical Political Action Committee are listed below. As of June 1, 1979, a record high of 73 physicians and spouses have joined MMPAC.

Joe L. Spears
Cabool

Rae W. Froelich
Lebanon

Richard V. Bradley
St. Louis

Claude W. Cooper
Thayer

H. B. Ivy
Springfield

Mrs. Dolores Ruhling
Webster Groves

Richard C. Hedges
North Kansas City

Jack N. Wiles
West Plains

Eugene T. Hansbrough
Poplar Bluff

Donald A. Fakhoury
Kansas City

John N. Martin
St. Joseph

Mrs. John N. Martin
St. Joseph

Marvin A. Singleton
Joplin

Max S. Franklin
St. Louis

Mrs. Max S. Franklin
St. Louis

W. L. Sportsman
Smithville

Howard J. McAlhany
Springfield

Mrs. Howard J. McAlhany
Springfield

Hubert A. Ritter
St. Louis

Mrs. Hubert A. Ritter
St. Louis

Edwin K. Burford
Cape Girardeau

John K. Layle
Kansas City

Robert R. MacDonald, Jr.
St. Louis

Louis P. Hetlage
Troy

Harry C. Eggleston
St. Louis

James Sisk
St. Louis

Bruce Stoliar
St. Louis

Mr. Royal O. Cooper
Jefferson City

Andrew McCanse
Kansas City

Mr. Edward M. Hirsch
St. Joseph

Francis X. Lieb
St. Louis

Melvin C. Kasten
Cape Girardeau

Mrs. Melvin C. Kasten
Cape Girardeau

Robert F. Cerza
St. Joseph

Richard P. Bowles
Liberty

Keith D. Jones
Warrensburg

Mrs. Keith D. Jones
Warrensburg

Mrs. F. T. H'Doubler
Springfield

Hugh E. Stephenson
Columbia

Gerard M. Callaghan
St. Louis

A. J. Campbell
Sedalia

Walter A. German
Springfield

F. Anthony Thomas
Kansas City

George H. Ladyman
Poplar Bluff

T. E. Ruff
Poplar Bluff

Mrs. Donald A. Fakhoury
Kansas City

Mrs. Charles H. Cozean
Cape Girardeau

Mrs. H. John Erickson
Sedalia

Donald E. McIntosh
Kansas City

Vernon H. Balster
St. Louis

Norma D. Farmer
Farmington

Mrs. William R McPhee
Kansas City

Mrs. Donald C. Sanders
Kansas City

Mrs. William M. Walker
Springfield

Irving H. Clark
Kansas City

Mrs. Richard V. Bradley
St. Louis

Mr. Lee G. Cochran
Cape Girardeau

Milton B. Ozar
Kansas City

K. L. Turner
Poplar Bluff

G. E. Thoma
St. Louis

John A. Griffith
Kansas City

Mrs. Jerry L. Meyer
Concordia

Edwin Masters
Sikeston

Roy W. Pearse
Nevada

Byron M. Stuart
Boonville

Jean A. Chapman
Cape Girardeau

William R. McPhee
Kansas City

Mrs. Louis P. Hetlage
Lake St. Louis

Ali Arbab
Kansas City

B. A. Moranville
Columbia

Kenneth C. Hollweg
Kansas City

George Bohigian
St. Louis

William R. Richardson
Union

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

QUART
LIQUID
4 CUPS
3 CUPS
1 CUP
Loma Linda
soyalac
POWDERED
NET WT. 16 OZ. (1 LB.) 454 g

A simple solution for beating the high cost of feeding babies.

wdered Soyalac mixed with water (according to
r tions on the label) is an inexpensive, soy-based
f t formula your patients can buy.
p to 50% less expensive than ready-to-serve
r ulas.
p to 25% less expensive than liquid concentrates.
ding our own!
yalac is the only leading milk-free infant for-
available as an inexpensive powder. It provides
ly the same nutritional balance as Soyalac's concentrated and ready-to-serve infant soy formulas – at a fraction of the cost.

Your patients who use formula will appreciate knowing about it.

For detailed information and samples, please call or write the Soyalac sales representative in your area.

Loma Linda Foods 11503 Pierce Street
Riverside, CA 92515 (714) 785-2475
Loma Linda Foods 13246 Wooster Road
Mount Vernon, OH 43050 (614) 397-7077

Loma Linda®

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Donald Judd, M.D., St. Louis, *Alternate*
Rae W. Froelich, M.D., Lebanon
George Bohigan, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
  Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
  Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
  Richard H. Fallon, M.D., St. Louis
  James M. Stokes, M.D., St. Louis
  J. Otto Lottes, M.D., St. Louis
  Theodore L. Paletta, M.D., St. Louis
  Frederick D. Peterson, M.D., St. Louis
  Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
  Vice-Councilor, Paul H. Rother, M.D., St. Charles
5th District, H. Peter Ekern, M.D., Mexico
  Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
  Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
  Donald McIntosh, M.D., Kansas City
  Ronald A. Youmans, M.D., Kansas City
  Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
  Marvin A. Singleton, M.D., Joplin
  Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
  Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
  Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Information for Contributors

Articles are accepted for publication on condition th
they are contributed solely to this journal. Material a
pearing in MISSOURI MEDICINE is protected b
copyright.

Manuscripts should be submitted to the editor, Wilfre
E. Wooldridge, M.D., P.O. Box 1028, 113 Madiso
Jefferson City, Mo. 65102. The transmittal letter shou
designate one author as correspondent and include h
address and telephone number.

In addition, in view of *The Copyright Revisio*
***Act of 1976*, effective Jan. 1, 1978, transmittal le**
ters to the editor should contain the following la
guage: "In consideration of the Missouri Stat
Medical Association's taking action in reviewin
and editing my submission, the author(s) unde
signed hereby transfers, assigns or otherwise co
veys all copyright ownership to the MSMA in th
event that such work is published by the MSMA.
We regret that transmittal letters not containin
the foregoing language signed by *all* authors of th
submission will necessitate delay in review of th
manuscript.

Manuscripts should be typewritten, double space
and the original with one carbon copy submitted. Reta
another carbon copy for proofreading. Used manuscrip
are not returned. School and hospital appointments of th
author should accompany the manuscript. It is desirab
that a synopsis-abstract of approximately 135 words a
company the manuscript.

References should be arranged at the end of the artic
in the order in which the references are cited in the te
The reference should give name of author, title of artic
name of periodical, volume number, initial page numb
and year. Authors are responsible for reference accuracy

Illustrations should be glossy prints or drawings
India ink on white paper. They should not be mounte
and name of author and figure number should be pencile
lightly on the backs. Legends should appear on a separa
sheet.

Legal difficulties may arise from unauthorized use
names, initials or photographs in which individuals can
identified. Permission should be secured from patient
legal guardian and signed duplicate or photostat subm
ted with such photographs or identification. The Edit
and Editorial Board assume no responsibility for th
opinions and claims expressed in articles contributed
authors. If citation of an institution related to the article
made, approval of the chief of service should be given in
letter accompanying the article.

Reprint order blanks will accompany proof, which w
be sent to authors prior to publication.

All material other than scientific should be receive
prior to the first of the month preceding month of public
tion.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehlan
Director of Management Services, Michael R. Porter

ontents for June, 1979

cientific Articles

ultiple Unusual Pulmonary Nodules, *Case Report;* David S. Martin, M.D., Peter A. Rasario, M.D., Leslie E. Tucker, M.D. and Denyse N. Parnell, M.D. 313

hrombotic Thrombocytopenic Purpura; Richard L. Gruenewald, M.D. and Michael C. Perry, M.D. 316

utaneous Protrusion of a Sliding Compression Screw, *Case Report;* Robert A. Shively, M.D. 320

alignancies of the Nasal Fossa; Nestor R. Canoy, M.D. and Janet Berg, M.D. 323

ews and Features

SMA News Round-Up ..... Insert (304-305)
hoto-Comment by James W. Clawson, M.D. 310
ditor's Corner 311
resident's Message 331
SMA Auxiliary 333
n Brief 334
r. Richard V. Bradley Elected MSMA President-Elect 335
SMA Auxiliary Elects Mrs. Rudy Ruhling 335
ews From the Medical Schools 338
ontinuing Education Coming Events 340
omponent Society News 342
ew Members 343
n Memoriam 343
ndex to Advertisers 345
issouri Medicine in Review 346

Missouri Medicine

THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D.
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
F. Thomas Ott, M.D., St. Louis
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102.

Copyright 1979 by Missouri State Medical Association. All rights reserved.

Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

ALDOMET®
(METHYLDOPA | MSD)
TABLETS: 500 mg, 250 mg, and 125 mg
MSD
MERCK SHARP & DOHME
Copyright © 1979 by Merck & Co., Inc.

Tenuate® Ⓒ
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request — Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

8-3921 (Y587A)

Whether overweight is a complicating factor... or just uncomplicated overweight.

Tenuate® Dospan® Ⓒ IV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

Merrell

For prescribing information see opposite page.

new
600 mg tablets
Motrin®
ibuprofen, Upjohn

More convenient for some of your patients.

Now there are three Motrin tablet strengths to choose from-
600 mg, 400 mg, and 300 mg

UPJOHN MOTRIN

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001, U.S.A.

© 1979 The Upjohn Company

J-6999-4

MEDICAL DEFENSE ASSOCIATES, LTD.

WE ARE NO. 1

Yes, we provide medical malpractice insurance coverage for more Missouri medical doctors than any other company in this state.

Because . . . . . . .We have lower rates generally.

Because . . . . . . .We require no additional donation or investment.

Because . . . . . . .We are not dependent on Standard Insurance Markets for expensive reinsurance.

Because . . . . . . .We consume less than 8% of premium in expenses, which is about one half the amount paid in commissions alone in a Stock Company.

Because . . . . . . .Independent thinking doctors would rather save money than be told they must make certain investments to qualify for insurance.

Because . . . . . . .The doctor's good sound practice of medicine is all that is necessary to qualify him for insurance with Medical Defense Associates, Ltd.

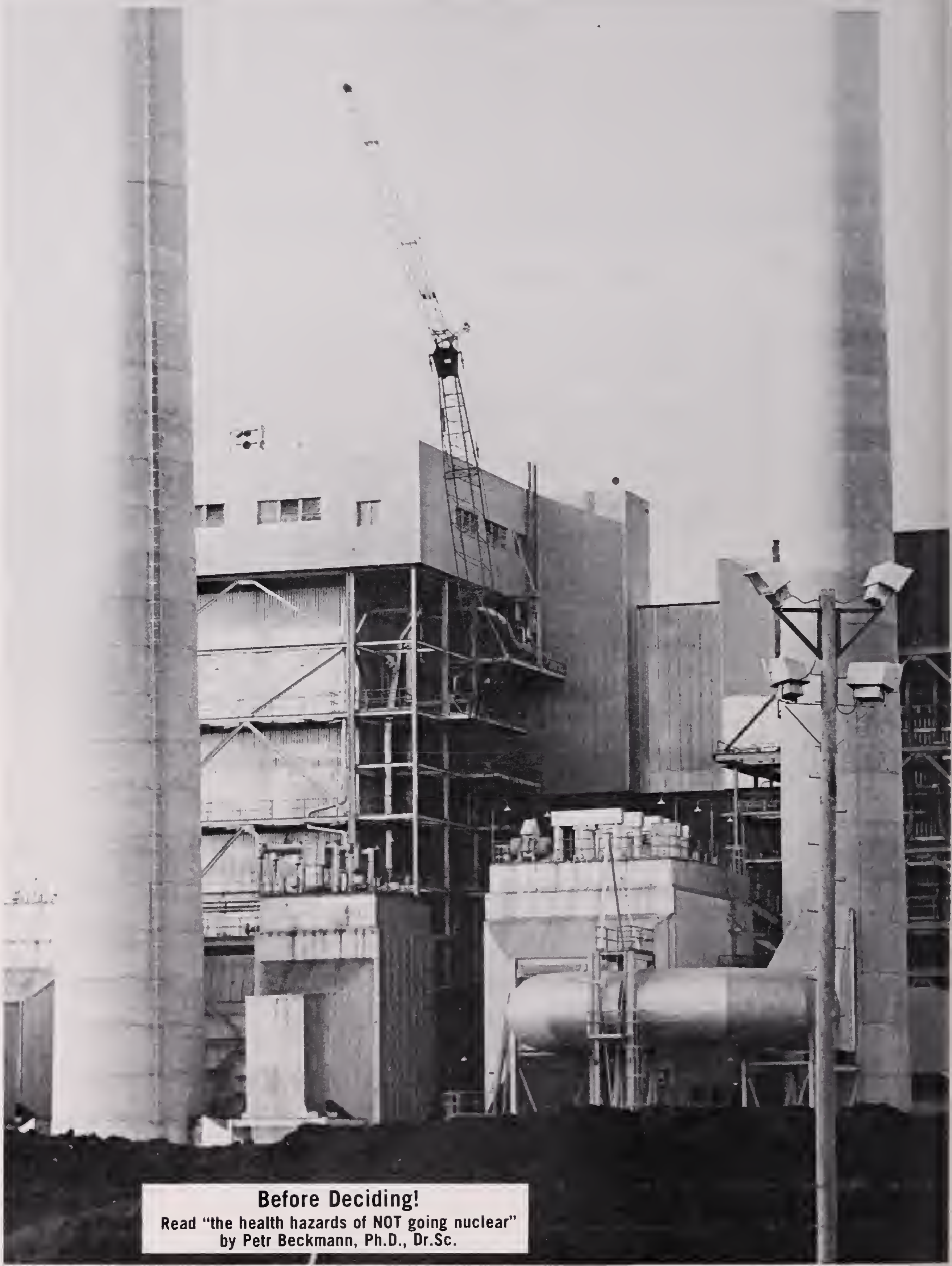
Yes, we're number one and you, Doctor, have made it so.

Call for Quote of our Low Rates.
1-800-492-7212
417-883-0199

or write:

Missouri Malpractice Managers, 1031 E. Battlefield, Suite 117-B
Springfield, Missouri 65807

Photo-Comment by James W. Clawson, M.D., Springfield



Before Deciding!
Read "the health hazards of NOT going nuclear"
by Petr Beckmann, Ph.D., Dr.Sc.

Editor's Corner

ALL IN A DAY'S WORK

After the first so-called editorial published under this title, I was accused of stealing the heading from the *Reader's Digest*. I have a perfect defense — I began writing a column with this title somewhat more than 15 years ago. This considerably antedated *R.D.* My own appeared in the *Greene County Medical Bulletin*. Therefore, I apologise to nobody and, out of pure stubbornness, do so again to exhibit the warm, human humor which is infinitely better than its commercial counterpart.

* * *

Eddie Cornelison, a farmer in best Ozarkian tradition, watched intently while I wrote a prescription. I handed it to him. He looked at it solemnly.

"Doc," said Eddie, "this is the only one of these things I have been able to read. You write purty well."

"Maybe, Eddie," I replied. "That isn't too bad but sometimes it gets awful and I can hardly read it myself."

"Aw, I doubt that," protested Eddie. "Maybe you jist don't read too good."

* * *

Aunt Martha Compton is 91, a spritely little thing and very, very sharp. Her views are always rather unorthodox. They were even more unexpected when Martha took to discussing Women's Lib the other day.

Especially, I was startled when she announced that the woman's suffrage movement was a terrible thing and completely unnecessary.

"Why," I asked. "I am very surprised."

"A woman don't need to go to the polls," she said. "Any woman who can't control her man's vote ain't much of a woman and shouldn't be allowed to vote, anyway."

* * *

During a busy day, I again excused myself, saying I needed to talk to a patient about a laboratory report. After a few moments, I returned. I suppose there was a frown on my countenance.

"Didn't you get through," asked the old fellow who was perched on the examination table.

"No," I replied, "the line is still busy."

"I thought of a solution, if your patient is up in years."

"What is it," I asked, "there must be a better way."

"Try calling during the Lawrence Welk show," he said. "They will always be home, and they won't talk long."

* * *

And I was walking along the river bank with an old friend. He had always been hearty. Recently, however, he developed a number of exasperating ailments. He reached for a cigarette.

"John," I said, "I thought you stopped smoking."

"Oh, no," he replied, "I have to smoke."

"Really? May I ask why you must smoke?"

"Quite simple," said John. "I have so damn many things wrong with me that I still smoke one cigarette each day so that I will have something to give up in case I get worse."

* * *

I hadn't seen Eddie Barron for three or four years. He is a cadaverous looking guy, tall and slim with bones jutting out in all directions.

"How are things, Eddie?" I asked.

"Middlin'," came the laconic reply. "Overwifed and underfished."

Wilfred E. Wooldridge, M.D.

When the indications surface...

Net wt 1 oz
Net wt 1/2 oz
Net wt 1/32 oz
(approx)
NDC-0081-07
Net wt 1 oz
NEOSPORI
OINTMEN
POLYMYXIN B-BACITRACIN-
TOPICAL ANTIBACTE
Net wt ½ oz
NEOSPORI
OINTMENT
Net wt. 1/32 oz (approx.)
NEOSPORIN
POLYMYXIN B-BACI
TOPICAL ANT

NEOSPORIN® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base), special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa; primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis); traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne i mind that the skin is more liable to becom sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failu to heal. During long-term use of neomycin-containin products, periodic examination for such signs is advisable and the patient should be told to discontinu the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoide for that patient thereafter.

PRECAUTIONS: As with other antibacterial prepar tions, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Volume 76, Number 6 — June, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Copyright, 1979 by Missouri State Medical Association. All Rights Reserved.

DAVID S. MARTIN, M.D., PETER A. RASARIO, M.D.,
LESLIE E. TUCKER, M.D. *and* DENYSE N. PARNELL, M.D., *St. Louis*

Multiple Unusual Pulmonary Nodules

Case Report

MULTIPLE BILATERAL PULMONARY NODULES are usually metastatic, but may be benign. However, one cause of such nodules, multiple leiomyomatous hamartomas, is difficult to classify into one group or the other. Diagnosis of this rare entity can only be made by microscopic examination. Even with a known primary malignancy, nodules on a chest radiograph are not diagnostic of pulmonary metastases.

We report a case to illustrate this point and briefly review the known features of this entity.

CASE REPORT

A 45-year-old white woman entered the hospital with acute urinary retention and a pelvic mass. She previously had been healthy except for a hysterectomy performed 18 years ago for "fibroids." Upon physical examination, there was found a tender, 10 cm midline pelvic mass extending to the left lateral pelvic wall and nodules in the right breast.

Admission laboratory data were normal. The admission chest radiograph (Fig. 1) showed multiple 2 cm to 2.5 cm well circumscribed, noncalcified, dense, solid, bilateral nodules in the lung fields. There was no pleural effusion. The heart and other mediastinal structures appeared normal. A xeromammogram demonstrated a lesion with small speckles of calcification in the right breast. A barium enema and intravenous pyelogram (IVP) demonstrated the pelvic mass but no other abnormalities. Due to the appearance of the chest roentgenogram, the patient was considered to have metastatic disease from either the pelvis or the breast. The remainder of her preoperative evaluation did not detect further metastatic foci in the bones, liver and upper gastrointestinal tract or small bowel.

Six days after her admission, a right breast biopsy and an exploratory laparotomy with bilateral salpingo-oophrectomy were done. The pelvic mass was found to be two large, chocolate cysts due to endometriosis. The right breast lesion, undiscernible grossly, was microscopically intraductal carcinoma in situ.

Since neither diagnosis adequately explained the presumed pulmonary metastases, a left exploratory thoracotomy and biopsy were done. After the lung biopsy, a modified right radical mastectomy was performed.

The lung biopsy specimen measured 4 cm x 1 cm x 1 cm and contained a white spherical nodule 1.5 cm in diameter. The nodule shelled easily from the sur-

---

This case report illustrates an unusual form of pulmonary nodules. The authors discuss the nature of leiomyomatous hamartomas and emphasize the need for histologic confirmation of multiple pulmonary nodules.
Dr. Martin is from the Department of Radiology, St. Louis University School of Medicine. Dr. Rasario is from the Division of Pulmonary Diseases, University of New Mexico School of Medicine, Albuquerque, N.M. Dr. Tucker is from the Scott & White Clinic, Temple, Tex. Dr. Parnell is from the Department of Pathology, Medical College of Georgia, Augusta, Ga.

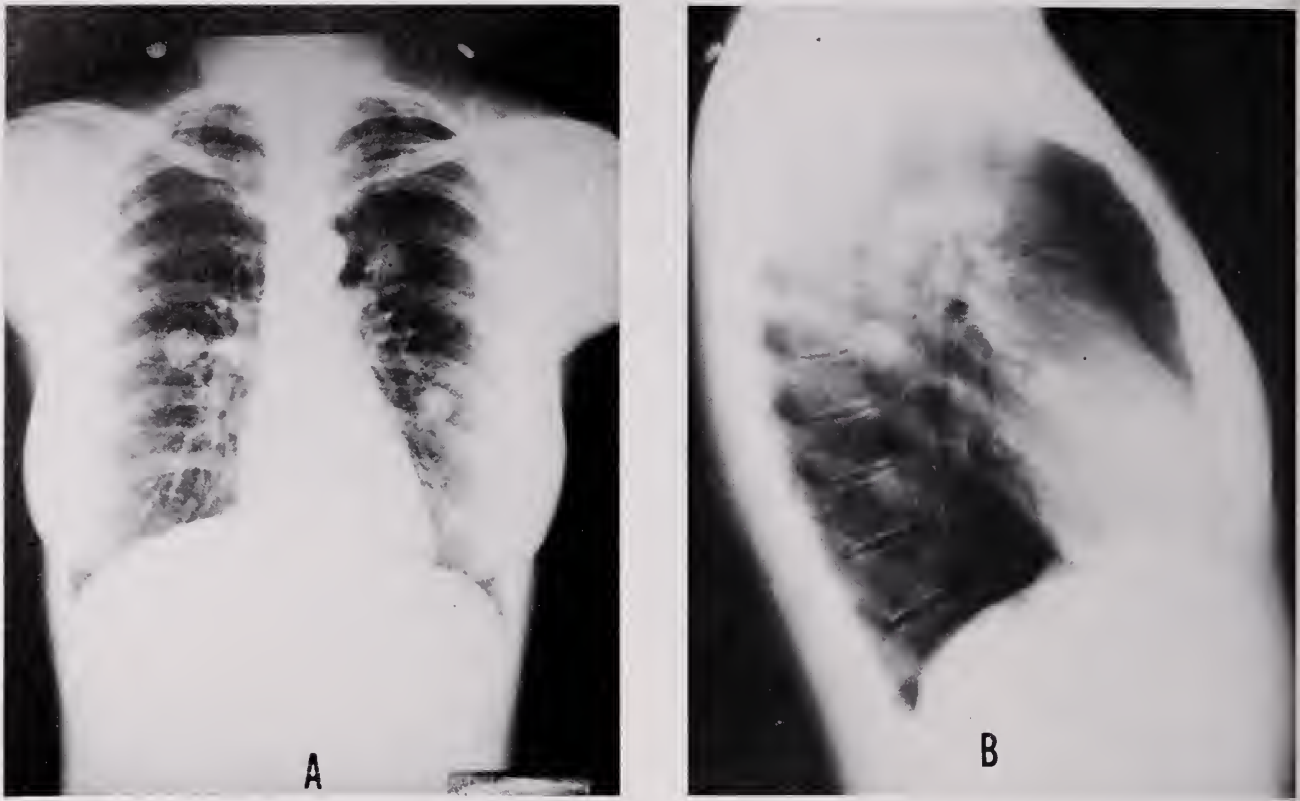


Fig. 1 Posteroanterior (A) and lateral (B) chest roentgenographs show bilateral multiple nodular densities throughout the lungs.

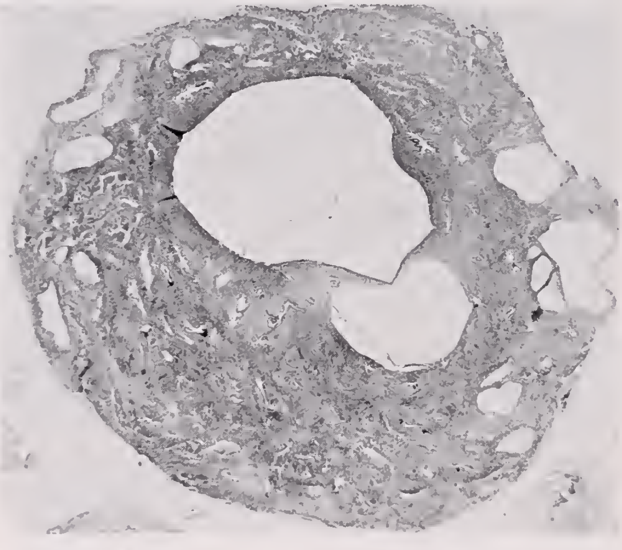


Fig. 2 Well circumscribed nodule with numerous cystic spaces. A thin rim of residual lung tissue is present (HeE, ×10) at extreme bottom of picture.

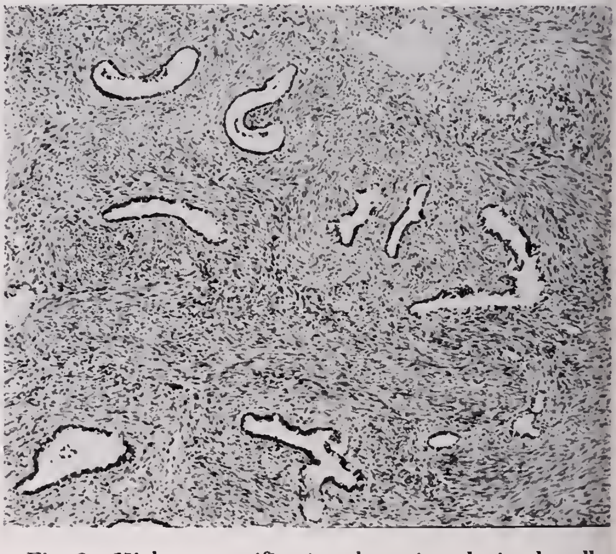


Fig. 3 Higher magnification shows interlacing bundles of smooth muscle and cuboidal or columnar cells lining cystic spaces (HeE ×90).

rounding tissue. On section, it revealed a whorled pattern interrupted by many small cystic spaces. Microscopically, the nodule was made up of interlacing bundles of spindle cells resembling smooth muscle with abundant intervening collagen. No stromal mitoses were seen. The small cystic spaces were lined by a single layer of cuboidal or columnar epithelium. They resembled small ducts or glands. Some epithelial cells had vacuolated cytoplasm. However, there were no secretions. The lamina and mucicarmine stain were negative. At the periphery of the nodule, plump alveolar lining cells extended into and blended with the epithelium of the cystic spaces (Figs. 2 & 3). Attempts at reconstruction of the cystic spaces into connecting tubules were unsuccessful and no bronchiole was seen to enter into the nodule. The pathologic diagnosis was leiomyomatous hamartomas. In the mastectomy specimen, residual foci of intraductal carcinoma were present. All 12 resected lymph nodes were free of metastases.

DISCUSSION

Hamartomas are tumor-like formations of disorganized but well differentiated tissue. On histological studies, they are seen to be composed of the same cellular elements as the organ in which they are found.[1] The most common form of pulmonary hamartoma is the solitary chondrohamartoma, which predominantly affects men and usually contains calcium.[2] A rare, diffuse pulmonary disease of children, which presents radiographically as a reticulated infiltrate, is called hamartomatous malformation of the lung.[3]

The third type of hamartoma is the leiomyomatous hamartoma which is rare. There have been fewer than 25 cases reported in the English literature. They are found in middle aged women, are multiple and none have been calcified.[4] Sixty percent of these women have had prior hysterectomies for benign uterine tumors.

The term, "benign metastasizing leiomyomas," has been used in some reports of women with prior uterine leiomyomas and who have developed pulmonary nodules. Some authors consider the two terms to be describing the same condition.[5-7] If this is true, the clinical spectrum varies considerably. Some cases act in an entirely benign manner with as long as a 29-year survival, a lack of local recurrence or further metastases, and a spontaneous decrease in size of the pulmonary nodules.[8] Other cases behave like metastatic disease with poor survival, enlargement of the pulmonary nodules and stromal mitoses on histologic examination.[9-11]

At present, it is impossible by clinical, radiographic or histologic means to decide if there is one disease with variable behavior or two separate but similarly appearing entities.[6, 12] However, two variables do appear to offer some limited prognostic value when confronted with such an entity. The younger patients and those with more pulmonary symptoms tend to have a worse prognosis.

Regardless of the controversy, our patient illustrates how misleading the lack of histologic evidence can be. She had three separate diseases: carcinoma in situ of the breast, endometriosis with chocolate cysts and pulmonary nodules. Considering her clinical presentation and admission chest radiograph, one might have concluded that she had a metastatic pelvic malignancy. With her mammogram and chest radiograph, metastatic breast carcinoma with pulmonary and pelvic metastases were simulated. However, the definitive distinction could be made only by biopsy and histologic examination.

SUMMARY

This paper presents a report of an unusual form of pulmonary nodules and a discussion of the nature of leiomyomatous hamartomas. The need for histologic confirmation of multiple pulmonary nodules is emphasized.

Acknowledgment: The authors express appreciation to Thomas Maher, M.D., Lily Hanes, M.D. and John B. Shields, M.D. for their assistance.

REFERENCES

1. Robbins: Pathology, W. B. Saunders, 2nd Edition, 1962.
2. Madewell, John and Feigin, David S., Lcdr. USNR: Seminars in Radiology. Vol. 12, No. 3, 1977.
3. Cruickshank, D. B. and Harrison, G. K.: Diffuse Fibroleiomyomatous Hamartomatosis of the Lung. Thorax 8:316-318, 1953.
4. Sargent, E. N., Barnes, R. A. and Schwim, C.: Multiple Pulmonary Fibroleiomyomatous Hamartomas. Am. J. Roent. 110:694-700, 1970.
5. Bachman, D. and Wolff, M.: Pulmonary Metastases From Benign-Appearing Smooth Muscle Tumors of the Uterus. Amer. J. Roent. 127:441-447, 1976.
6. Horstmann, Joseph P., Pietra, G. G., Harman, J. A., Cole, N. G., Jr. and Gruispan, Saloman: Spontaneous Regression of Pulmonary Leiomyomas During Pregnancy. Cancer 39:314-321, 1977.
7. Silverman, J. F. and Kay, S.: Multiple Pulmonary Leiomyomatous Hamartomas. Cancer 38:1199-1204, 1976.
8. Pocock, E., Craig, J. R. and Bullock, W. K.: Solitary Hamartomas Seen Predominantly in Males. Cancer 38:2096-2100, 1976.
9. Castleman, B. and Kibbee, B. U.: Case Records of the Massachusetts General Hospital: Case 17-1963. New Eng. J. Med. 268:550-557, 1963.
10. Del Pozo, E. and Mattei, I.: Multiple Pulmonary Leiomyomatous Hamartomas. Am. Rev. Resp. Dis. 100:338-390, 1969.
11. Madani, M. A., DaFoe, C. S. and Ross, C. A.: Multiple Hamartoma of the Lung. Thorax 21:468-472, 1966.
12. Spiro, R. H. and McPeak, C. J.: On the So-Called Metastasizing Leiomyoma. Cancer 19:554-568, 1966.

Reprints: David S. Martin, M.D.
1383 White Orchard
Creve Coeur, Mo. 63141

IN ADDITION TO 13 regional scientific meetings to be held throughout the country during 1980, the AMA will begin a program of special "Theme Meetings." The first of these meetings, on cardiovascular disease, will be in Los Angeles on April 10-13, 1980. The second, on the theme of therapeutics, will be in Kansas City on Sept. 27-30, 1980. The Theme Meetings will include a variety of other postgraduate courses.

RICHARD L. GRUENEWALD, M.D. *and*
MICHAEL C. PERRY, M.D., *Columbia*

Thrombotic Thrombocytopenic Purpura

THE SYNDROME OF THROMBOTIC THROMBOCYTOPENIC PURPURA (TTP) was first described by Moschcowitz in 1925 as an "acute febrile pleiochromic anemia with hyalin thrombosis of the terminal arterioles and capillaries."[1] He specifically noted the presence of fever, anemia, renal abnormalities and fluctuating neurologic symptoms. A postmortem examination showed the widespread appearance of hyalin-like thrombi in the distal arterioles to which the clinical abnormalities were attributed.

The diagnosis of TTP is made infrequently; fewer than 400 cases have been reported since its first description. TTP has been reported in patients from infancy to 77 years of age with a peak incidence in the third decade.[2] Women are affected more frequently than men by a ratio of 3 : 2. Although described in siblings[3] and in a husband and wife,[4] the cause remains unknown. Similar syndromes have been described in association with connective tissue diseases, including systemic lupus erythematosus,[5] rheumatoid arthritis,[6] Sjorgen's syndrome[7] and polyarteritis nodosa.[8] Infectious agents, including rickettsial,[9] bacterial[10] and fungal organisms[11] have been associated with microangiopathic findings as have various malignancies[12] and hemangiomas.[13]

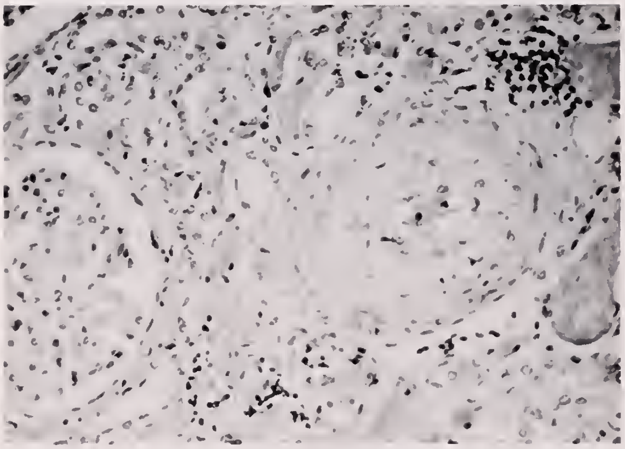


Fig. 1 Renal specimen biopsy showing arteriolar thrombosis in a patient with TTP (original magnification × 440).

PATHOGENESIS

The clinical manifestations of TTP can be explained by the thrombotic vascular occlusions in the distal arterioles throughout the microcirculation. The vessels are occluded by an intraluminal hyalin-like material associated with local endothelial proliferation but without significant vasculitis (Fig. 1). Similar material also may be seen in the vascular endothelium. A biopsy of the gingiva, bone marrow, liver, kidney, lymph nodes or spleen may demonstrate these vascular occlusions. A gingival biopsy provides a simple and relatively safe method for histologic confirmation of the clinical diagnosis.[14]

The endothelial proliferation and subendothelial deposits were initially thought to indicate that the primary insult was endothelial damage with secondary platelet adhesion and aggregation. However, primary intravascular aggregation of platelets with intraluminal and subendothelial fibrin deposition may also occur. Morrison *et al* postulated that soluble immune complexes may cause both direct injury to the endothelial cells and concomitant aggregation of platelets with release of vasoactive materials.[15]

Recently, Byrnes and Khurana described a deficient "plasma factor" in a patient with TTP.[16] This factor resembles prostacyclin (prostaglandin X), a potent natural inhibitor of platelet aggregation, and may be a modulator of platelet-endothelial cell interaction. Remuzzi *et al* demonstrated a diminished synthesis of this plasma factor in a patient with TTP.[17] Additional studies are needed to isolate this plasma factor and confirm its deficiency in the pathogenesis of TTP. It is still not known if platelet aggregation in TTP occurs as an acquired primary platelet defect or as the result of damaged endothelium. Current management of the syndrome should be directed at arresting each of these pathologic processes.

DIAGNOSIS

Five clinical and laboratory criteria are necessary to establish the diagnosis of TTP. They are

TABLE 1
PRESENTING COMPLAINTS IN TTP

Neurologic	60%
Purpura/Hemorrhage	44%
Fever	20%
Pallor	17 %
Jaundice	9%
Arthralgia/Myalgia	7%

thrombocytopenia, usually associated with purpura or ecchymoses; a microangiopathic (intravascular fragmentation) hemolytic anemia; fluctuating neurologic symptoms; fever without underlying infection; and renal parenchymal disease, as evidenced by an abnormal urinalysis and a decreased creatinine clearance. Although a chronic relapsing form of the syndrome has been described, 80% of the patients are dead within three months of the onset of these symptoms.[18]

Table 1 describes the presenting signs and symptoms of TTP.[19]

The physical findings listed in Table 2 are often overlooked in the initial examination unless specifically evaluated. An abnormal urinalysis and anemia are present in more than 90% of patients at the time of initial evaluation.

A typical case of TTP may exhibit a prodrome of fever, malaise and respiratory or gastrointestinal symptoms before the development of the full-blown syndrome. Occasional patients may present with the insidious onset of diffuse myalgias and arthralgias. Raynaud's phenomenon and even frank gangrene of the fingers and toes may occur secondary to the microcirculation compromise. Abdominal pain, which is sometimes severe, may be related to involvement of the pancreatic microcirculation.[19]

Purpura and hemorrhage are most common in the skin, buccal mucosa and retina. Massive gastrointestinal, genitourinary or central nervous system hemorrhages are uncommon. When they occur, they appear to be related to severe thrombocytopenia or to other unassociated, underlying diseases. The hemoglobin level is below 10.5 gm/dl in virtually all patients and less than 5.5 gm/dl in about a third of cases. Most patients have an appropriate reticulocytosis and frequently exhibit nucleated red blood cells in the peripheral smear. The most characteristic morphologic abnormality is the presence of bizarre, distorted, and fragmented red blood cells (Fig. 2) called schistocytes or helmet cells.

Thrombocytopenia is an almost constant finding in TTP and is reflected in a positive tourniquet test, prolonged bleeding time and poor clot retraction. Increased utilization, rather than decreased production, is the probable cause of the thrombocytopenia. Leukocytosis is present in about one half of the patients and some have white blood cell counts in excess of 20,000/μl. A considerable left-shift may be seen with the appearance of immature granulocytic precursors. The leukoerythroblastic features of leukocyte and erythrocyte precursors in the peripheral blood, as well as thrombocytopenia, may warrant a bone marrow examination which usually shows erythroid hyperplasia and normal-to-increased numbers of megakaryocytes.

TABLE 2
PRESENTING PHYSICAL FINDINGS IN TTP

Fever	98%
Purpura/Hemorrhage	96%
Pallor	96%
Neurologic	92%
Jaundice	42%

Occasional prolongation of the prothrombin time and decreased fibrinogen levels have been noted.[20] Increased titers of fibrin degradation products have been reported, but most cases of TTP show no evidence of disseminated intravascular coagulation.[21]

Fluctuating neurologic symptoms may range from headache (34% of patients) to coma (31% of patients).[22] Organic brain syndrome, hemiparesis, aphasia and convulsions may all be somewhat evanescent. Dramatic improvements in the patient's course have often been attributed to specific therapy, although the natural course of the syndrome is unpredictable.

Clinical jaundice with elevated levels of un-

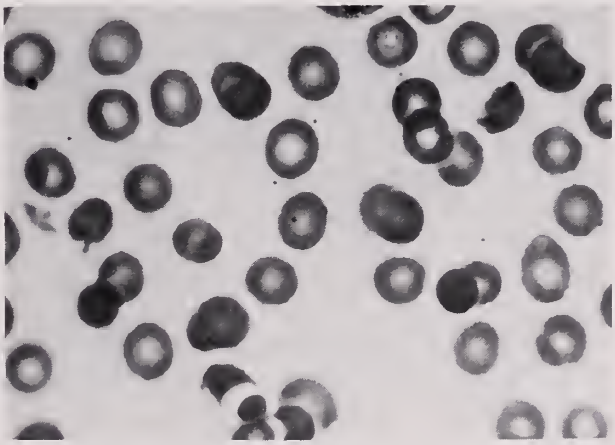


Fig. 2 Peripheral blood smear with characteristic schistocytes (helmet cells) as seen in TTP (original magnification × 880).

Thrombotic thrombocytopenic purpura is an uncommon disease which affects terminal arterioles throughout the microcirculation. Because it is rarely seen, it is rarely considered. This review is designed to heighten the awareness of physicians who might see patients with this disease.

Dr. Gruenewald is a Fellow, Division of Hematology and Medical Oncology, Department of Medicine and Dr. Perry is Assistant Professor, Division of Hematology and Medical Oncology, Department of Internal Medicine, University of Missouri School of Medicine.

conjugated bilirubin appears to be related to the degree of hemolysis as well as to parenchymal liver disease. Elevated bilirubin levels may be accompanied by an increased plasma hemoglobin and a decreased haptoglobin. The Coomb's test is usually negative. These findings suggest intravascular destruction of red blood cells as the most likely cause of hemolysis. Cross-transfusion studies confirm the extra-corpuscular defect leading to hemolysis.[23]

MANAGEMENT

Until recent years, therapy for TTP has been disappointing. In general, treatment modalities can be divided into three major groups:

1. *Splenectomy*

Shapiro (1957) first reported a case of TTP with remission following splenectomy.[24] In Reynolds' review of 340 cases of TTP, only 62 patients had survived longer than three months.[25] Of these, approximately 50% underwent splenectomy sometime during the course of their illness. Unfortunately, nonresponders are seldom reported and the actual benefit of splenectomy remains unknown. The recent report of TTP in a previously splenectomized patient further raises questions regarding the efficacy of such therapy.[26]

2. *Pharmacologic therapy (anti-inflammatory, anti-coagulant, and anti-platelet therapy)*

Corticosteroids have been used with variable responses in the treatment of TTP. Aside from a transient rise in the platelet count, there is no evidence that corticosteroids alter the natural course of TTP. There appears to be no correlation between the disease activity and lymphocyte function, soluble immune complexes, immunoglobulinopathies or other inflammatory processes.[18]

Heparin has also been advocated for the management of TTP because of similarities to disseminated intravascular coagulation (DIC). Unlike DIC, however, TTP is usually not accompanied by an appreciable depletion of clotting factors. Because heparin may enhance the risk of fatal hemorrhage, it is probably not indicated unless defibrination has been unequivocally proven to be present.

Because of the suspected role of platelet aggregation in TTP, various antiplatelet drugs have been used. These agents have diverse pharmacologic effects on platelet function (Fig. 3). Aspirin blocks the platelet release reaction by acetylating prostaglandin synthetase. Sulfinpyrazone is a weak inhibitor of the platelet release reaction but a potent inhibitor of platelet adhesion. Its use (as a single agent) in high doses has been reported effective in sustaining remissions in TTP.[27] Dipyridamole has been shown to raise the cyclic AMP level of platelets by inhibiting cyclic AMP phosphodiesterase. As a result, the elevated cyclic AMP levels seem to inhibit the primary release phase and the second wave of platelet aggregation.[28] Periactin binds to the platelet membrane and inhibits the uptake of serotonin; this mechanism appears to correlate with the inhibition of the primary wave of platelet aggregation. Dextran 70 has been shown to increase the bleeding time of normal individuals, perhaps by its ability to coat the vascular endothelium and inhibit platelet aggregation.

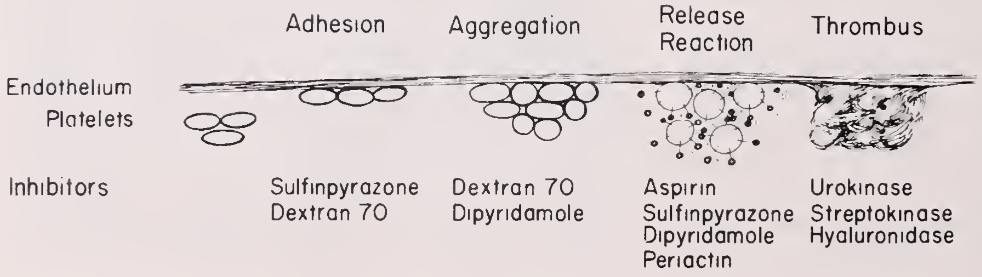


Fig. 3 Stages of thrombus formation and various pharmacologic inhibitors of platelet function.

3. *Hematologic support and exchange transfusions*

Bukowski *et al* reported a complete remission in eight of 14 patients (57%) undergoing exchange transfusions for the treatment of TTP.[29] The average requirement to induce a remission was 8 to 12 units of fresh whole blood exchanged over 12 hours. Favorable signs in the exchange transfusions included a platelet count greater than 50,000/μl 48 hours after the procedure and resolution of the neurologic abnormalities. There is usually an associated improvement in the morphological alterations of the red blood cells. These remissions have been sustained up to 13 years.

The mode of action of exchange transfusions is still unknown. Fresh whole blood exchanges may remove a toxic material in TTP patients or add an unidentified substance (plasma factor) which inhibits platelet aggregation and microangiopathic hemolysis. Plasmapheresis, plasma infusions and hemodialysis have also been used with some efficacy in patients with oliguria or volume overload states. Again, the mechanisms of action are unknown and responses have been variable.

Summary

The diagnosis and management of TTP is complex, requiring an awareness of the multiple facets of the syndrome. Associated diseases may obscure the diagnosis or compound it. Occasionally, the symptoms evolve over a period of weeks rather than the usual several days. Thrombocytopenia, microangiopathic anemia, fever, neurological symptoms and renal abnormalities constitute the classic pentad of TTP.

The clinical and laboratory abnormalities seem to be related to platelet and fibrin occlusions of the arterioles throughout the circulatory system. The initiating cause of this platelet aggregation is still undetermined; an acquired primary platelet defect or damaged endothelium may play a role in the pathogenesis of the syndrome. Attempts to carry out controlled, prospective studies to evaluate the effectiveness of treatment modalities have been limited by the rarity of the disease.

Preliminary investigations seem to favor the use of antiplatelet drugs and fresh whole blood exchange transfusions. The use of corticosteroids in the management of TTP is still acceptable although its effectiveness is questionable. Splenectomy in the acutely ill thrombocytopenic patient should be secondary to other measures because of its morbidity and mortality.

Since the submission of this paper, Lian *et al* have described clinical remissions in three patients with TTP following the infusion of normal plasma.[30] Plasma from these patients during relapse induced in vitro aggregation of washed platelets from both normal donors and TTP patients in remission. This platelet aggregating activity of TTP plasma diminished as a function of time when incubated with normal plasma at 37 C. It was suggested that some instances of TTP are due to a deficiency of a plasma inhibitor. This inhibitor counteracts the platelet aggregating factor found in TTP patients.

References

1. Moschcowitz, E.: An Acute Febrile Pleiochromic Anemia With Hyalin Thrombosis of the Terminal Arterioles and Capillaries. Arch. Intern. Med. 36:89, 1925.
2. Rodriguez, H. F., Babh, D. F., Santiago, E. P. *et al:* Thrombotic Thrombocytopenic Purpura: Remission after Splenectomy N. Engl. J. Med. 257:983, 1957.
3. Paz, R. A., Elijovich, F., Barcat, J. A. *et al:* Fatal Simultaneous Thrombocytopenic Purpura in Sihlings. Br. Med. J. 4:727, 1969.
4. Watson, C. G. and Cooper W. M.: Thrombotic Thrombocytopenic Purpura. JAMA 215:1821, 1971.
5. Laszlo, M. H., Alverez, A. and Feldman, F.: The Association of Thrombotic Thrombocytopenic Purpura and Disseminated Lupus Erythematosus: Report of a Case. Ann. Intern. Med. 42:1308, 1955.
6. Blackman, N. S., Cohen, B. M., and Watson, J.: Thrombotic Thrombocytopenic Purpura. JAMA 148:546, 1952.
7. Steinherg, A. A., Green, W. T. and Talal, N.: Thrombotic Thrombocytopenic Purpura Complicating Sjogren's Syndrome. JAMA 215:757, 1971.
8. Benitez, L., Mathews, M. and Mallory, G. K.: Platelet Thrombosis with Polyarteritis Nodosa. A.M.A. Arch. Path. 77:116, 1964.
9. Mettler, N. E.: Isolation of a Microtatobiote From Patients With Hemolytic-Uremic Syndrome and Thrombotic Thrombocytopenic Purpura and From Mites in the United States. N. Engl. J. Med. 281:1023, 1969.
10. Bayer, A. S., Theofilopoulos, A. N., Eisenberg, R. *et al:* Thrombotic Thrombocytopenic Purpura-Like Syndrome Associated With Infectious Endocarditis. JAMA 238:408, 1977.
11. Rohboy, S. J., Salisbury, K., Ragsdale, B. *et al:* Mechanisms of Aspergillus-Induced Microangiopathic Hemolytic Anemia. Arch. Intern. Med. 128:790, 1971.
12. Brain, M. C., Azzopardi, J. G., Baker, L. R. *et al:* Microangiopathic Hemolytic Anaemia and Mucin — Forming Adenocarcinoma. Brit. J. Haematology 18:183, 1970.
13. Propp, R. P. and Scharfman, W. B.: Hemangioma — Thrombocytopenia Syndrome Associated With Microangiopathic Hemolytic Anemia. Blood 28:623, 1966.
14. Goldenfarb, P. B. and Finch, S. C.: Thrombotic Thrombocytopenic Purpura: A Ten Year Survey. JAMA 226:644, 1973.
15. Morrison, J. and McMillan, R.: Elevated Platelet Associated IgG in Thrombotic Thrombocytopenic Purpura. JAMA 238:1944, 1977.
16. Byrnes, J. J. and Khurana, M.: Treatment of Thrombotic Thrombocytopenic Purpura With Plasma. N. Engl. J. Med. 297:1386, 1977.
17. Remuzzi, G., Misiani, R., Mecca, G. *et al:* Thrombotic Thrombocytopenic Purpura — A Deficiency of Plasma Factors Regulating Platelet-Vessel-Wall Interaction. N. Engl. J. Med. 299:311, 1978.
18. Amorosi, E. L.: Antiplatelet Treatment of Thrombotic Thrombocytopenic Purpura. Ann. Intern. Med. 86:102, 1977.
19. Amorosi, E. L. and Ultman, J. E.: Thrombotic Thrombocytopenic Purpura: Report of 16 Cases and Review of the Literature. Medicine 45:139, 1966.
20. Jaffe, E. A., Nachman, R. L., Merskey, C. *et al:* Thrombotic Thrombocytopenic Purpura — Coagulation Parameters in Twelve Patients. Blood 42:499, 1973.
21. Baker, L. R., Rubenberg, M. L., Dacie, J. V. *et al:* Fibrinogen Catabolism in Microangiopathic Haemolytic Anemia. Brit. J. Haematology 14:617, 1968.
22. Cuttner, J.: Splenectomy, Steroids, and Dextran 70 in Thrombotic Thrombocytopenic Purpura. JAMA 227:397, 1974.
23. Brittingham, T. E., III and Chaplin, H., Jr.: Attempted Passive Transfer of Thrombotic Thrombocytopenic Purpura. Blood 12:480, 1957.
24. Shapiro, H. D., Doktor, D. and Churg, J.: Thrombotic Thrombocytopenic Purpura (Moschcowitz's Disease): Report of a Case With Remission After Splenectomy and Steroid Therapy. Ann. Intern. Med. 47:582, 1957.
25. Reynolds, P. M., Jackson, J. M., Brine, J. A. *et al:* Thrombotic Thrombocytopenic Purpura — Remission Following Splenectomy. Am. J. Med. 61:439. 1976.

(Continued on page 328)

ROBERT A. SHIVELY, M.D., *St. Louis*

Cutaneous Protrusion of a Sliding Compression Screw

Case Report

In previous reports, authors have proposed treating unstable, intertrochanteric hip fractures with either osteotomy and medial displacement or by anatomic nailing with a sliding screw plate.

The following case report demonstrates a complication of the sliding screw plate that has not been previously described.

The use of the sliding screw plate in the treatment of an unstable, intertrochanteric fracture has increased. This article alerts physicians to a complication that has not been reported previously.

Dr. Shively is from the Department of Orthopedic Surgery, St. Louis University School of Medicine.

Case Report

A 77-year-old man from the State Mental Hospital was admitted with a severely comminuted, unstable intertrochanteric fracture of the right hip (Fig. 1). After a preoperative evaluation, he was taken to the operating room where a routine anatomic reduction (Fig. 2) and internal fixation with a sliding screw plate device was performed using a 150-degree side plate and a 4½-inch sliding screw (Fig. 3).

The postoperative course was uneventful and he was returned to the State Hospital for rehabilitation. He was followed at regular intervals and the sliding screw was noted to progressively telescope despite his nonweight-bearing status (Fig. 4). Two months following internal fixation, the patient returned with the sliding screw completely telescoped so that the threads were abutting the side-plate collar and the shaft of the sliding screw was protruding through a grossly infected wound in the lateral thigh (Fig. 5).

The patient was returned to the operating room where the screw plate assembly was removed with considerable difficulty.

Discussion

Comminuted intertrochanteric fractures of the hip are unstable when there is lack of cortical abutment along the medial border of the trochanteric region. Dimon and Dimon and Hughston[1, 2] developed a technique by which stability was obtained by impacting the spike of the proximal head-neck fragment within the medullary canal of the medially displaced femoral shaft and fixing it with a short nail plate. By this technique, significant improvement was obtained over the previous anatomic nailing with nail-plate fixation.

Many authors have since supplemented this technique by using the sliding compression screw plate.[3-7] It is felt that fixation of the anatomically reduced, unstable intertrochanteric fracture with the sliding compression screw plate allows "automatic" displacement into a stable position of cortical apposition to occur. Compression at the

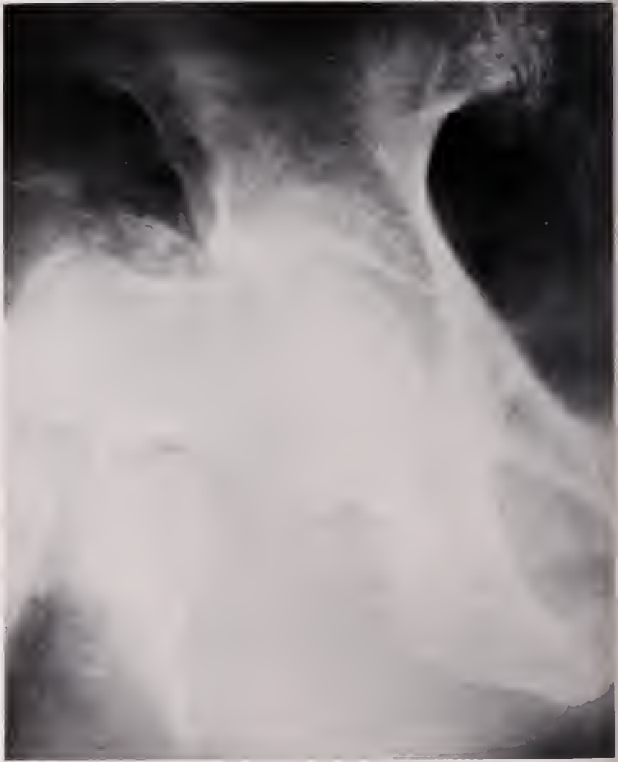


Fig. 1 AP x-ray of comminuted, unstable intertrochanteric fracture of the right hip.

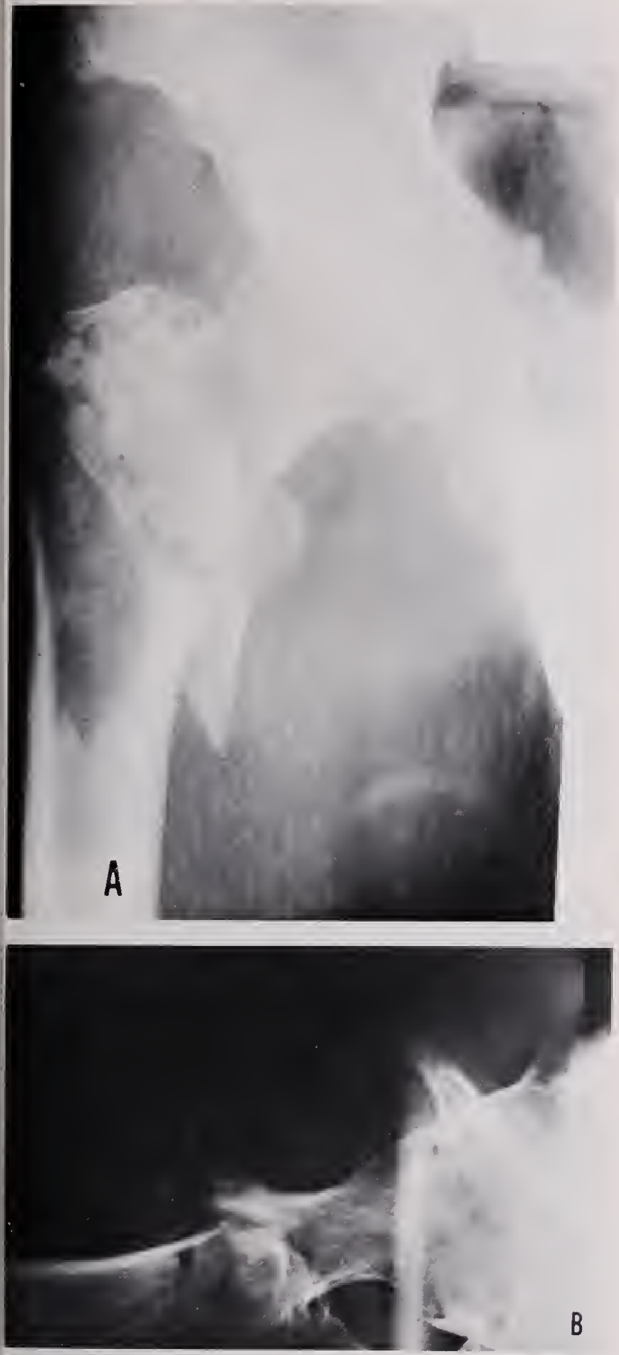


Fig. 2 AP *(A)* and lateral *(B)* x-rays of reduced fracture at the time of surgery prior to internal fixation.

fracture site is produced not only by the compression screw, but, also, by any force acting on the hip in the line of the body axis which is directed down the shaft of the sliding screw and strikes the fracture line at a right angle.[3] There is reported an average of 15.7 mm of telescoping of the screw into the barrel and 5 mm of medial displacement in the unstable fractures.[4]

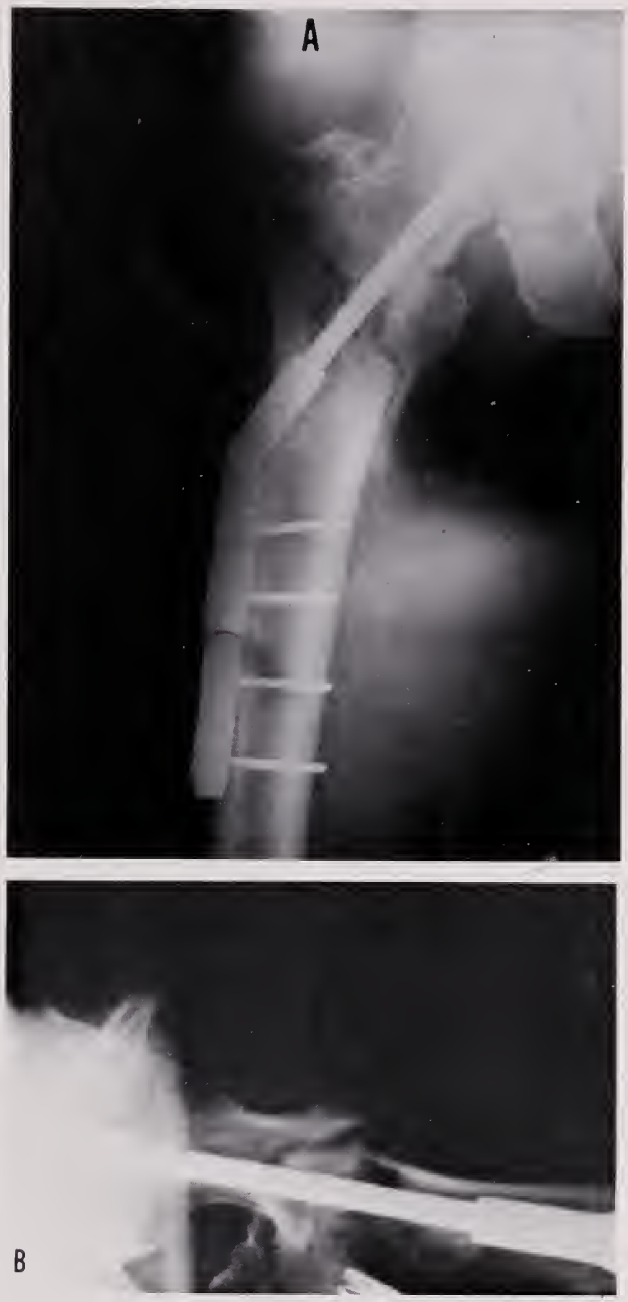


Fig. 3 AP *(A)* and lateral *(B)* x-rays showing sliding compression screw in place at time of surgery.

In this case, the unstable intertrochanteric fracture was reduced anatomically on the fracture table and a routine sliding screw plate fixation carried out. The device was in adequate position although a valgus 150-degree side plate was used which necessitated a longer sliding screw. Routine follow-up x-rays showed a progressive telescoping of the sliding screw and eventual penetration of the skin of the lateral thigh with subsequent sepsis.

The patient was an extremely thin man with little soft-tissue coverage of the lateral thigh.

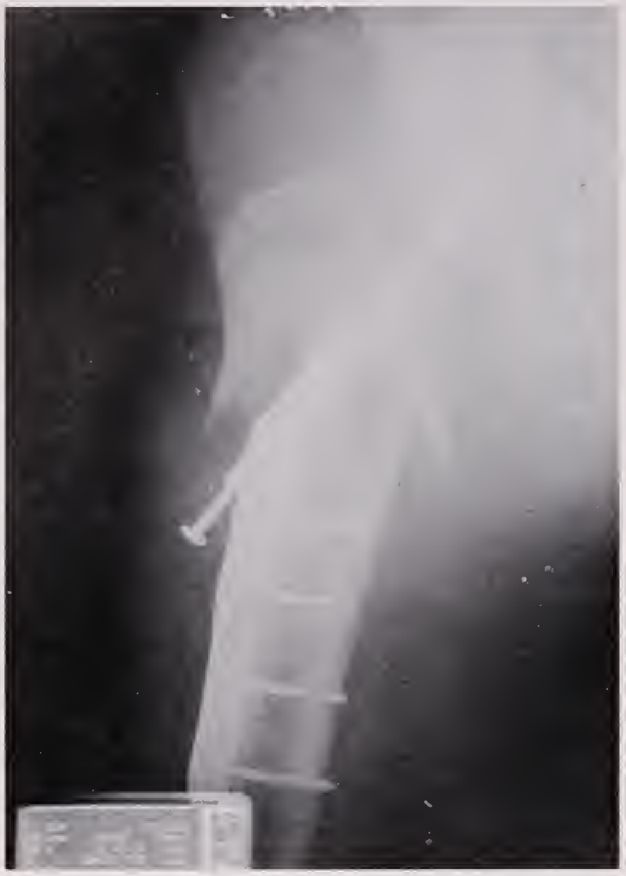


Fig. 4 AP x-ray taken one month postoperatively shows telescoping of compression screw and settling of femoral neck.

However, telescoping of this magnitude has never before been reported. Rather the opposite problem of disengagement of the screw and side plate has been reported.[8]

Upon removing the screw plate an additional problem was noted. When there is marked telescoping of the sliding screw with a valgus side plate the proximal one or two screws in the side plate are obscured by the shaft of the sliding screw and are inaccessible for removal with a screwdriver (Fig. 5). In this case, the screws were broken at the side plate-femur interface.

It is felt that the use of a 135-degree side plate, which allows use of a shorter sliding screw, and additional compression with the compression screw at the time of surgery may have prevented this unfortunate circumstance.

References

1. Dimon, J. H., III: The Unstable Intertrochanteric Fracture. Clin. Orthop. 92:100-107, 1973.
2. Dimon, J. H., III and Hughston, J. C.: Unstable Intertrochanteric Fractures of the Hip. J. Bone Joint Surg. 49-A:440-450, April 1967.
3. Clawson, D. K.: Trochanteric Fractures Treated by the Sliding Screw Fixation Method. J. Trauma 4:736-752, 1964.

(Continued on page 328)

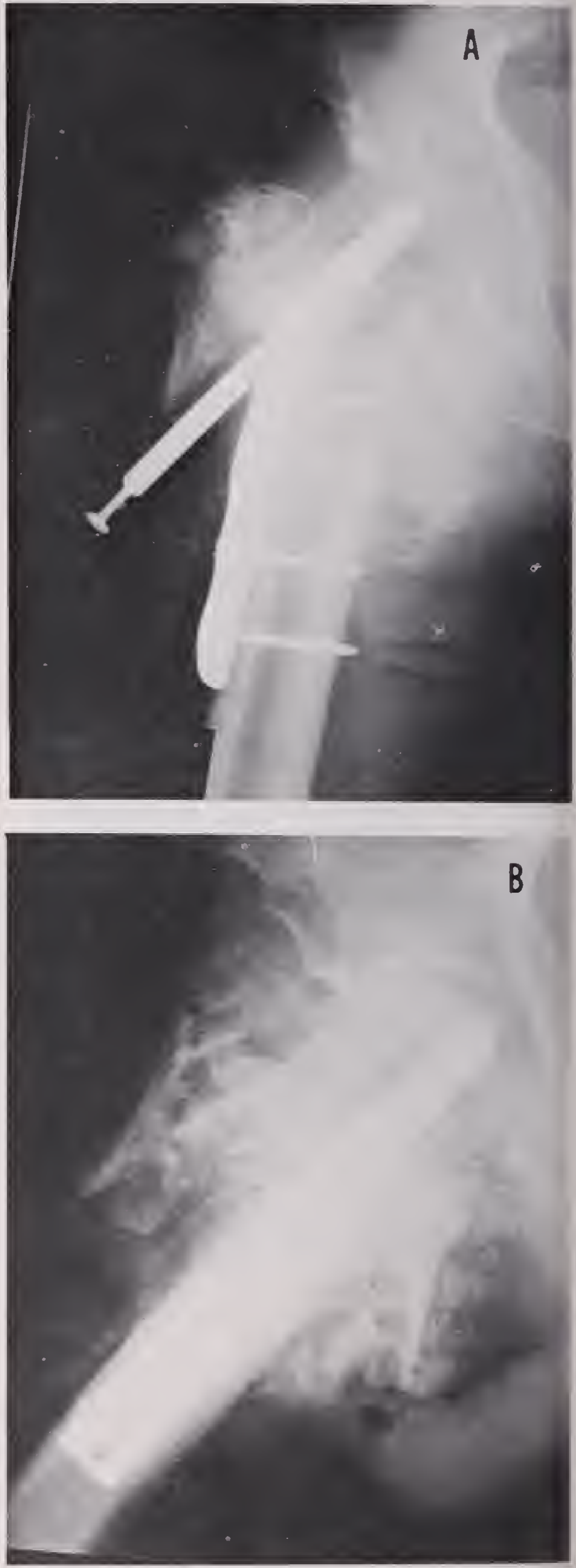


Fig. 5 AP *(A)* and lateral *(B)* x-rays show complete telescoping of compression screw and collapse of femoral neck.

NESTOR R. CANOY, M.D. *and*
JANET BERG, M.D., *Columbia*

Malignancies of the Nasal Fossa

INTRANASAL MALIGNANCY has been included with malignancies of the paranasal sinuses in reporting statistics and treatment results. Excluding cancers of the central nervous system and orbit, it is known that cancer of the intranasal fossa and paranasal sinuses together compose 3% of the head and neck cancers. Cancers of the nasal cavity are second in frequency to cancers of the maxillary antrum and of greater frequency than cancers of the ethmoidal, sphenoidal and frontal sinuses.

This is a retrospective analysis of 36 cases of malignancies of the intranasal fossa seen and treated at the Ellis Fischel State Cancer Hospital. The purpose of this study is to show the clinical behavior and prognosis of malignancies in the intranasal fossa, analyze the treatment methods employed and determine the optimum treatment for cancers in these regions based on this study and review of the reports in the literature.

ANALYSIS OF CLINICAL MATERIAL

The various histological types of malignancies in the intranasal fossa noted in the study are listed in Table 1. Epidermoid carcinoma is the most common malignancy in this region. In the study, 17 cases are well- to mid-differentiated and four cases are poorly differentiated. One case is reported as a lymphoepithelioma. This histology is considered now to be a poorly differentiated epidermoid carcinoma with very little stroma. There are five cases of unclassified malignancies. These are highly anaplastic tumors.

The epidermoid carcinomas in this series comprise 58%. In several larger series, 65% to 75% of the cases were epidermoid carcinomas. Except for the neuroblastoma and the fibrosarcoma, the age incidence observed is between 60 and 75 years. All patients diagnosed as having epidermoid carcinoma, unclassified malignancies and adenocarcinoma have a history of heavy smoking habits. The most common clinical presentation is that of a polypoid or exophytic mass. The infiltrating lesions presenting as a superficial ulcerative lesion or an erythematous maculo-papular lesion are mostly confined in the vestibule or the columella. With epidermoid carcinoma, the infiltrating and nodular lesions appear more common than the polypoid and exophytic.

Two of the reported epidermoid carcinomas were verrucous. Although verrucous carcinomas are generally thought to be radio-resistant, the two cases reported in this study responded quite well to radiation therapy. Cancers of the intranasal fossa are more frequently seen in men than in women and the ratio in the study is 1.8 : 1. Lesions presenting in the lower septum and columella or in the vestibular portion were diagnosed earlier and showed minimal involvement

TABLE 1
HISTOLOGIC TYPES OF CANCERS OF THE INTRANASAL FOSSA

Histologic Types	*No. of Cases*	*Age Incidence (years)*	*Clinical Presentation & No. of Cases*	*Extent of Disease & No. of Cases*
Epidermoid carcinoma	21	58-81	Infiltrating & nodular 12 cases, polypoid 5, exophytic 2, verrucous 2	Maxillary antrum 2, ethmoids & nasopharynx 1, orbit 1
Malignant melanoma	6	64-74	Polypoid 6 cases	Maxillary antrum 1, maxillary antrum & orbit 1
Unclassified malignancy	5	57-62	Infiltrating & nodular 3 cases, massive lesion 2	Both maxillary antra 1, orbit 1, ethmoid sinus 1, frontal sinus 1
Adenocarcinoma	1	74	Polypoid	Entire nasal fossa
Esthesioneuro-blastoma	1	37	Polypoid	Ethmoids and orbit
Fibrosarcoma	1	39	Polypoid & nodular	Bone destruction

This is a retrospective analysis of 36 cases of malignancies of the intranasal fossa treated at Ellis Fischel State Cancer Hospital. In addition to reviewing the literature, the authors discuss clinical behavior, prognosis and treatment methods for cancers of the intranasal fossa and paranasal sinuses.

Dr. Canoy is Director, Department of Radiation Therapy, Ellis Fischel State Cancer Hospital and Cancer Research Center. Dr. Berg was a fourth year medical student at the University of Missouri School of Medicine at the time this paper was written. She is now serving the second year of her residency in psychiatry at the University of Washington, Seattle.

This investigation was supported by Clinical Cancer Education Program Grant No. CA-17946 from the National Cancer Institute, Department of Health, Education and Welfare.

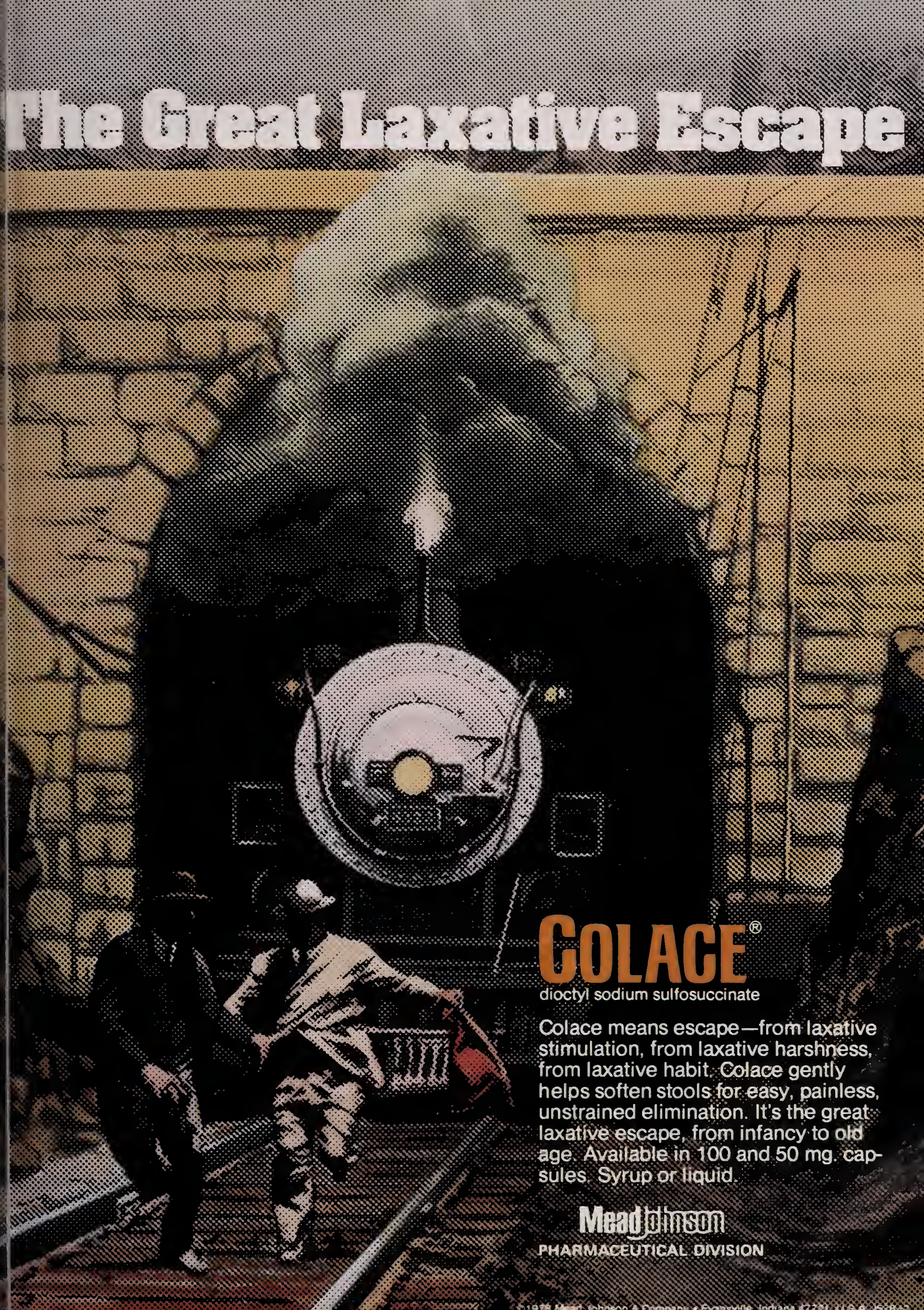
except for two patients with extensive ulcerations. Lesions in the olfactory portion or deeper in the septum and turbinates tended to be larger lesions. One third of the cases (36%) revealed minimal to extensive involvement of the paranasal sinuses, cheek, lip, orbit, with bone destruction or with cervical node metastasis (Table 2).

Survival is definitely related to the extent of the disease when first seen for treatment. Patients with minimal extension into the maxillary antrum were salvaged with radiotherapy alone or in combination with local surgery (polypectomy, septectomy, and/or Caldwell-Luc). One patient had a recurrence after 5,000 rads of telecobalt 60 therapy and was salvaged with polypectomy, Caldwell-Luc and intracavitary therapy by using a sandwich technique with one radium source in the intranasal cavity and another radium source in the maxillary antrum through the Caldwell-Luc opening. Those with extensive involvement of the paranasal sinuses, upper lip and orbit or with extensive recurrence after definitive therapy either with surgery or with radiotherapy died of local failure and disseminated disease. There were seven cases with nodal metastases involving the submandibular and subdigastric nodes. Three patients had clinically palpable nodes when first seen. Only one had bilateral nodes. The other four patients developed nodal metastases after definitive treatment to the primary. No prophylactic radiation was given to the draining nodes in these four cases. These patients were all treated with radical neck dissections. Only one was salvaged and five died of disseminated disease. One is alive with disease.

Radiation therapy was employed in most cases. Two patients with polypoid malignant melanoma were treated with external radiation using telecobalt 60. One had complete regression and no evidence of persistent malignancy but died of extensive visceral metastasis without any clinical evidence of pulmonary metastasis. Some of the patients were treated with orthovoltage x-ray, usually 200 to 250 kV with either 1 mm copper filter or thoreous filter. The smallest dose given was 3,000 Roentgens in 10 fractions. There was complete regression of the lesion. There was also necrosis of the septum. The patient remained free of disease and died of coronary heart disease five years after. With other patients, the orthovoltage dosages were in the range of 5,000 Roentgens in five weeks. Fifty percent of the patients were treated with curative intent with telecobalt 60 therapy at 80 cm SSD through an AP field which encompassed the whole nose and the medial portion of the maxillary antrum as well as the upper lip. The usual dosages were 5,500 to 6,500 in the usual fractionation of 1,000 rads per week at a depth of 2 cm or 3 cm. The mucositis was well

TABLE 2
EXTENT OF DISEASE AND PROGNOSIS

Extent	*No. of Cases*	*Survival*
Lower septum and columella	13	8 NED and 5 died of local recurrence and disseminated disease
Olfactory portion or 2/3rds of the nasal fossa	11	6 NED and 5 died of local recurrence and disseminated disease
Extension to adjoining paranasal sinuses, cheek, lip, and orbit	11	3 NED and 8 died of local recurrence
Bone destruction	5	Died of local failure and disseminated disease
Nodal metastases	6	1 NED and 5 died of disseminated disease



COLACE®
dioctyl sodium sulfosuccinate

Colace means escape—from laxative stimulation, from laxative harshness, from laxative habit. Colace gently helps soften stools for easy, painless, unstrained elimination. It's the great laxative escape, from infancy to old age. Available in 100 and 50 mg. capsules. Syrup or liquid.

Mead Johnson
PHARMACEUTICAL DIVISION

©1978 Mead Johnson & Company • Evansville, Indiana

COMPATIBILITY

Eastern Tiger Swallowtail Butterfly
(Papilio glaucus)

Does it influence your choice of a peripheral/cerebral vasodilator*?

Vasodilan–compatible with coexisting diseases (e.g., glaucoma, diabetes)

Vasodilan has not been reported to affect the course of coexisting disease; it has not been reported to affect blood sugar levels or to raise intraocular pressure.

Vasodilan–compatible with concomitant therapy

Vasodilan has not been reported to affect the treatment of coexisting disease; it is compatible with such drugs as hypoglycemics and miotics.

Vasodilan–compatible with your total regimen for vascular insufficiency

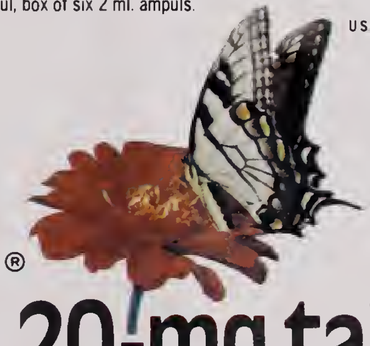
Vasodilan can be a valuable adjunct in planning a total therapeutic program for vascular insufficiency.

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:
Possibly Effective:
1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.
Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.
Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.
Parenteral administration is not recommended in the presence of hypotension or tachycardia.
Intravenous administration should not be given because of increased likelihood of side effects.
Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.
Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.
Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.
Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836



VASODILAN® 20-mg tablets
(ISOXSUPRINE HCl)
20 mg q.i.d. recommended dosage

MeadJohnson
PHARMACEUTICAL DIVISION

© 1978 MEAD JOHNSON & COMPANY • EVANSVILLE INDIANA 47721 U.S.A. MJL 7-4237R

This asthmatic isn't worried about his next breath...

he's active he's effectively maintained on

QUIBRON®

Each capsule or tablespoonful (15 ml) liquid contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg

- theophylline for effective around-the-clock bronchodilator therapy
- 100% free theophylline

Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.
Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.
Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e., clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.
Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.
How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100. Liquid in bottles of 1 pint and 1 gallon.
See package insert for complete prescribing information.

Mead Johnson PHARMACEUTICAL DIVISION

© 1979 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. MJL 8-4294R2

tolerated and the late sequelae consisted of induration of the dorsum of the nose. The failures were not outside the treatment fields, indicating an adequate volume of treatment. This indicates also that in massive disease where the masses occupy the nasal fossa or involve both the olfactory portion and the vestibular portion of the nasal fossa, complete sterilization by radiation therapy alone is not possible in all cases (Fig. 1).

Surgery consisted of either a septectomy, polypectomy or Caldwell-Luc where there was extension into the medial wall of the adjoining maxillary antrum. Two out of three patients with malignant melanoma undergoing this type of surgery had no evidence of disease at four years and six years (Table 3). Usually, radiotherapy is preferred over surgery in treating nasal fossa cancers simply because of the cosmetic results. However, in malignant melanoma, surgery has been the treatment of choice because of the irratic response of malignant melanoma to radiation therapy.

Four patients were treated with a combination of surgery and external radiation because the margins of resection were inadequate (Table 3). All of these patients died of disseminated disease. Two of these patients had local recurrence in the paranasal sinuses, which are outside of the field of radiation. It is difficult to ascertain whether this was due to submucosal extension or to surgical implantation. A wider field should be employed in postoperative cases where the margins are positive for malignancy.

Radiotherapy has been used after surgery to treat recurrence around the margins of resection or extension into the adjoining paranasal sinuses. One patient had only minimal recurrence and responded very well to radiotherapy and had no evidence of disease for three years. The other had extensive recurrence into the lip, columella and adjoining paranasal sinuses and died following local treatment failure and eventual disseminated disease.

Surgery for local radiotherapy failures was successful in one case, but the patient then died of disseminated disease. Two other patients had recurrence at the surgical margins.

Eleven of 21 patients with epidermoid carcinoma had no evidence of disease at three years or more. The overall survival rate was 52%. Seventeen cases were mid- to well-differentiated and four were poorly differentiated. There was no difference in clinical behavior or in results of treatment between the well- to mid-differentiated and the poorly differentiated types. Only one with an unclassified malignancy had no evidence of disease. Most of the patients with unclassified malignancies had extensive disease occupying the entire nasal fossa, extending into the adjoining structures or causing bone destruction. These show the aggressive character of this disease.

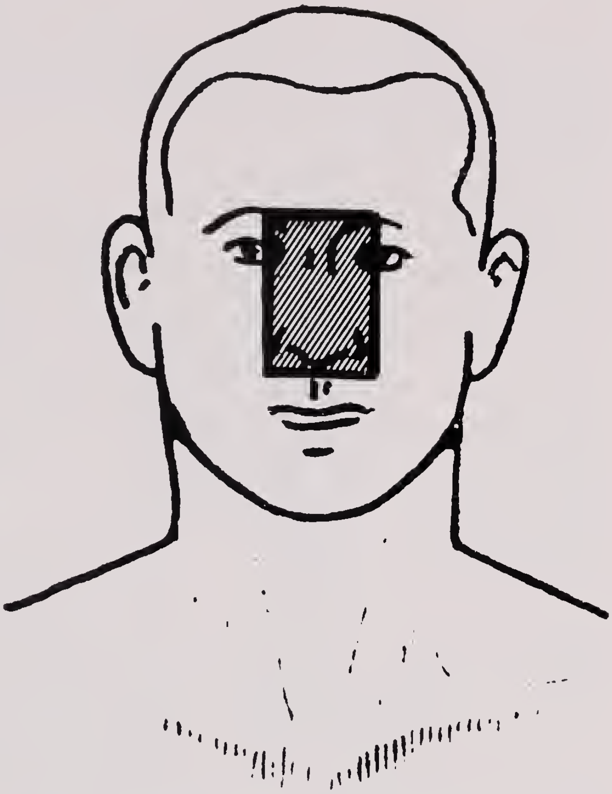


Fig. 1 Field arrangement includes only part of the maxillary antra, ethmoidal and frontal sinuses with the tumor dose computed at the base of the tumor. In carcinoma of the lower septum, the upper border extends only to the glabella. For postoperative RT, a wide maxillary field is used.

Discussion

Badib *et al*[1] reported on 57 patients with malignant tumors of the nasal fossa, 46 of which had intranasal carcinoma. Forty-four of the patients with intranasal carcinoma received radiation as primary treatment. Twenty-five received only external radiotherapy with single anterior fields for tumors in the vestibule and anterior part of the nasal cavity. Parallel opposing fields instead of wedged fields were employed in lesions of the posterior choanae in more extensive lesions. The tumor dose was in the range of 5,000 to 6,000 rads in five to six weeks. In ten cases, intracavitary or interstitial radium was used mainly in small tumors. Molds were inserted into the nasal cavity through the nostril for anterior lesions. A nasal

TABLE 3

CANCER OF PARANASAL SINUSES AND NASAL CAVITY: HISTOLOGY, TREATMENT, TREATMENT RESULTS

Histology	*Treatment*	*No. of Cases*	*Results*
Malignant melanoma	Local surgery	3	2 NED 4 & 6 years, 1 died of disseminated disease
	Radical surgery	1	Died of disseminated disease
	Radiotherapy	2	1 with excellent local control & another with partial response but both died of disseminated disease
Epidermoid carcinoma	Local surgery	4	2 NED 5-11 years, 2 died of disseminated disease with local recurrence
	Surgery & radiotherapy	3	Died of disseminated disease
	Radiotherapy alone	11	7 NED 3 years or greater, 4 died of disseminated disease
	Radiotherapy after surgical recurrence	2	1 died of local failure & disseminated disease, 1 NED 3 years
	Surgery after RT failure	3	2 still alive with disease, 1 died of disseminated disease
Unclassified	Radiotherapy alone	4	1 alive, 3 died of disseminated disease
	Surgery & radiotherapy	1	Died of local failure & disseminated disease
Adenocarcinoma	Surgery & radiotherapy	1	Died of local failure & disseminated disease
Esthesioneuroblastoma	Radiotherapy	1	Died of disseminated disease
Fibrosarcoma	Surgery	1	Local failure & disseminated disease

catheter was used for posterior lesions. The tumor dose was 6,000 to 7,000 rads in seven to eight days. External radiation plus intracavitary radium were used in nine cases of local extensive tumor with a dose of 5,000 rads in five weeks plus 3,000 rads in intracavitary radium in four to six applications. In early stages, the five-year survival is reported at 75%. Eighty percent of the recurrences appeared within the first year.

Bosch *et al*,[2] reporting on 40 cases of cancer of the nasal cavity, employed external radiation as the primary treatment modality in 34 cases. The tumor dose ranged from 5,000 to 6,000 rads in five to six weeks. Surgical excision was performed in six cases. The overall three-year survival rate was 56%. Again, their series showed that most recurrences were in the first two years, and the survival curve tends to be flat after the third year.

Haynes and Tapley[3] employed interstitial radium needle implants with dosages of 6,000 to 7,000 rads. They used molds containing a central source to the involved vestibule for small and superficial lesions confined to one nasal cavity. A surface dose of 7,000 rads was used, also. External radiation was given with a combination of cobalt 60 and electron beam at a dose of 5,500 in 6,500 rads in five to six weeks. Local control was achieved in 19 of the 22 cases.

Catlin[4] noted 13 patients with intranasal melanoma treated primarily with surgery and four had no evidence of disease (NED) at five years. Only one was treated with radiation — this patient failed to respond. The overall prognosis was very bad, with local failure and disseminated disease.

Tumors of the nasal cavity have a relatively low propensity to metastasize to regional nodes. No more than 15% of the patients showed evidence of clinical nodal metastasis at the time of diagnosis.[2, 4-6] There is no correlation between cases of nodal metastases and their histologic types. The lymphatic drainage of the nasal cavity can be classified into three major groups: (1) the vestibular area which drains into submaxillary nodes, (2) the olfactory area which includes both lateral and medial walls above the level of the inferior border of the superior turbinate and drains into lateral pharyngeal nodes and (3) the respiratory area which includes the lateral and medial walls at the level of the middle and inferior turbinates and drains either into the jugulo-digastric or lateral pharyngeal nodes. Tumors of the posterior part of the nasal cavity can attain great size before symptoms of obstruction and lateral extension appear in the ethmoidal, orbit and frontal sinuses and into the oral cavity. However, primary tumors in this region are infrequent. More often, they are primary lesions in the nasopharynx or in the ethmoidal sinuses extending into the posterior nasal fossa. Perineural involvement with extension into the frontal sinuses through the cribriform plate is rare and may lead to intracranial metastasis.

Table 4 presents a literature review of management of cancer of the paranasal sinuses and nasal cavity.

CONCLUSION

Case records of 36 patients with intranasal malignancy seen and treated at the Ellis Fischel

TABLE 4
MANAGEMENT OF CANCER OF THE PARANASAL SINUSES AND NASAL CAVITY
REVIEW OF THE LITERATURE

Authors	*No. of Patients*	*Location*	*Histology*	*Treatment*	*Survival 5 Years*	*Average Survival*
Frazell and Lewis[4]	416	Maxillary 62% Nasal 27%	Epid. 81% Adeno. 19%	RT 73%: External mult. Ports 3600-4000 r/300-350 R, 200-250 KV Interstitial 30-50 mc seeds Surgery: resection to exenteration	RT: 14% Surgery: 35% Nasal: RT 18% and Surgery 56% No diff. with squamous or adeno.	27.9%
Oliver[5]	19	Nasal & Paranasal No stratification	Not specified	RT: 2 million volt x-ray 5000-8000 R + 1 radium implant	>50% survivors were nasal ca RT & Surgery preferred management	26.04
Lewis and Castro[6]	772	Maxillary 58% Nasal 30%	Epid. 63% Adeno. 16% Nasal alone Epid. 52% Adeno. 16%	RT: Mult. Ports 250 KV 3600-4000 R Radon seeds 30-50 mc Surgery: resection to exenteration	RT: 16% Surgery: 31.7% Nasal: 40% Maxillary: 23%	31.5%
Larsson and Martensson[7]	379	Nasal & paranasal No stratification	Epid. 65% Adeno. 30%	RT: 6000 r/30 days 180 KV 0.5 mm cu Radium intracavitary 4 tubes 50 mg 3-5 hrs Surgery: resection to exenteration	RT: 12% RT & surgery: 45% Epid. 32% Adeno. 20%	27.0%

State Cancer Hospital are reviewed and analyzed as to histology, clinical behavior and treatment results. The retrospective analysis has shown the following:

(1) Lesions in the vestibular area are curable with local excision or with radiotherapy. Surgical excision with positive margins should be followed with radiotherapy. A homogenous dose should be delivered into the entire nasal fossa with wide margins to include the medial aspects of the paranasal sinuses, the ethmoidal sinus and the base of the frontal sinuses. This can be done with either a combination of 25 MeV x-rays and 19 MeV electrons or the combination of telecobalt 60 using a wedge pair technique with electron beam as a boost or with interstitial intracavitary therapy.

(2) If the lesion is bulky and occupies the entire nasal cavity, an electro-surgical debulking procedure may result in improved cures with radiation therapy. This will decrease the burden of poorly oxygenated cells which do not respond readily to radiation.

(3) Where the lesion has extended massively into the adjoining structures, especially with bone destruction, radiation, at best, is only palliative.

(4) It is not clear from the study and from the review of the literature whether there is any benefit from prophylactic radiation to the submandibular and pharyngeal nodes. It is clear that the chances of survival are definitely decreased when lymph nodes are positive. This may be a reflection of an aggressive nature of certain epidermoid carcinomas or unclassified malignancies.

(5) Small recurrences following surgical excision can be treated with radiotherapy. Patients who have recurrences after radiotherapy have a poor prognosis. In general, many of the recurrences tend to be more aggressive and generally fatal.

(6) Surgical excision of small malignant melanomas in the vestibular area can be curative. In larger lesions, a combination of local surgery and radiotherapy may increase local control. However, distant metastases appear to be frequent. Active immunotherapy combined with dacarbazine (DTIC) given as an adjuvant therapy may improve results.

(7) Epidermoid carcinoma of the nasal fossa disseminates also by the vascular route probably through the extensive vascular network in the nasal triangle.

Three patients with complete local control died of distant metastases. In this series, eight patients had documented pulmonary metastases, five had visceral metastases and one had brain metastases.

References

1. Badib, A. O., Kurohara, S. S., Webster, J. H. *et al:* Treatment of Cancer of the Nasal Cavity. Am. J. Roentgenol. 106:824-830, 1969.

2. Bosch, A., Vollecillo, L. and Frias, Z.: Cancer of the Nasal Cavity. Cancer 37:1458-1463, 1976.

3. Haynes, W. D. and Tapley, N. V.: Treatment of Carcinoma of the Nasal Vestibule. Am. J. Roentgenol. 120:595-602, 1974.

4. Frazell, E. L. and Lewis, J. S.: Cancer of the Nasal Cavity and Accessory Sinuses: A Report of the Management of 416 Patients. Cancer 16:1293-1301, 1963.

5. Oliver, P.: Cancer of the Nose and Paranasal Sinuses. Surg. Clin. N. Am. 47:595-600, 1967.

6. Lewis, J. S. and Castro, E. B.: Cancer of the Nasal Cavity and Paranasal Sinuses. J. Laryngol. Otol. 86:255-262, 1972.

7. Larsson, L. C. and Martensson, G.: Carcinoma and the Paranasal Sinuses and Nasal Cavities: A Clinical Study of 379 Cases Treated at Radiumhemmet and Atolaryngologic Dept. of Karolinska Sjukhuset, 1940-1950. Acta Radiol. 42:149-172, 1954.

Reprints: Nestor R. Canoy, M.D.
Ellis Fischel State Cancer Hospital
115 Business 70 West
Columbia, Mo. 65201

Thrombocytopenic Purpura

(Continued from page 319)

26. Zacharski, L. R., Lusted, D. and Glick, J. L.: Thrombotic Thrombocytopenic Purpura in a Previously Splenectomized Patient. Am. J. Med. 60:1061, 1976.

27. Eckel, R. H., Crowell, E. B., Waterhouse, B. E. *et al:* Thrombotic Thrombocytopenic Purpura — Platelet Inhibiting Drugs. Arch. Intern. Med. 137:735, 1977.

28. Mustard, J. F., Kinlough-Rathbone, R. I., Jenkins, C. S. *et al:* Modification of Platelet Function. Ann. N. Y. Acad. Sci. 201:343, 1972.

29. Bukowski, R. M., Hewlett, J. S., Harris, J. W. *et al:* Exchange Transfusions in the Treatment of Thrombotic Thrombocytopenic Purpura. Sem. Hematology 13:219, 1976.

30. Lian, E. C-Y, Harkness, D. R., Byrnes, J. J. *et al.* Presence of a Platelet Aggregating Factor in the Plasma of Patients with Thrombotic Thrombocytopenic Purpura (TTP) and Its Inhibition by Normal Plasma. Blood 53:333, 1979.

Reprints: Richard L. Gruenewald, M.D.
Div. of Hematology and Medical Oncology
Dept. of Internal Medicine
University of Missouri Medical Center
Columbia, Mo. 65212

Sliding Compression Screw

(Continued from page 322)

4. Ecker, M. L., Joyce, J. J., III and Kohl, E. J.: The Treatment of Trochanteric Hip Fractures Using a Compression Screw. J. Bone Joint Surg. 57-A:23-27, Jan. 1975.

5. Harrington, Kevin D. and Johnston, James O.: The Management of Comminuted Unstable Intertrochanteric Fractures. J. Bone Joint Surg. 55-A:1367-1376, 1973.

6. Jacobs, Rae R., Armstrong, H. James, Whitaker, James H. and Pazell, John: Treatment of Intertrochanteric Hip Fractures With a Compression Hi Screw and Nail Plate. J. Trauma 16(08):599-603, Aug. 1976.

7. Shumpelick, W. and Jantzen, P. M.: A New Principle in the Operativ Treatment of Trochanteric Fractures of the Femur. J. Bone Joint Surg. 37A:693-698, 1955.

8. Dunn, Edward J. and Skinner, Stephen R.: Disengagement of a Sliding Screw-Plate. J. Bone Joint Surg. 58-A: 1027-8, October 1976.

★
Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
Since 1899
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Borgmann and Philip E. Moppert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
Suite 202-A, 6600 W. 95th Street, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

Generics save money. Big money!

The FTC estimates that $400 million could be saved annually on the nation's Rx bill if physicians prescribed generics. Are you saving *your* patients extra dollars?

Purepac, America's leading manufac-turer of a national brand of generics, vould like to show you the tremendous avings possible with just three of our 700 eneric products:

DRUG		AVERAGE RX PRICE (100's)	$ SAVINGS WITH PUREPAC	% SAVINGS WITH PUREPAC
avabid Capsules*	150 mg.	$10.32		
urepac Papaverine	150 mg.	3.95	**$6.37**	61.7%
quanil Tablets*	400 mg.	8.15		
urepac Meprobamate	400 mg.	1.85	**6.30**	77.3%
ibrium Capsules*	10 mg.	8.76		
urepac Chlordiaze-poxide HCl.	10 mg.	3.90	**4.86**	55.4%

egistered trademarks of Marion Labs., Wyeth Labs., Roche Labs., respectively

Purepac generics save money. Big noney. Purepac is dedicated to providing our patients with quality products that re equivalent to their brand name ounterparts at significant savings.

But we can't do it alone. We need our cooperation.

Send for Purepac's *free* Brand Name/Generic Name Reference Chart today. You'll receive an alphabetical listing of brand name drugs with their generic counterparts.

And next time you write a prescription, write for Purepac brand generics. Your patients will know you care.

PUREPAC. Competitive prices and peace of mind.

FREE!

Please send me my FREE copy of Purepac's Brand Name/Generic Name Chart.

Name____________________

Address____________________

City__________State______Zip____

Mail to Purepac Pharmaceutical Co.,
200 Elmora Avenue, Elizabeth, N.J. 07207

MS 679

PUREPAC
Elizabeth, NJ 07207
THE LEADING NATIONAL BRAND OF GENERICS

V-Cillin K®
penicillin V potassium

is the most
widely prescribed
brand of oral penicillin

Lilly
V-CILLIN K
C 29

Tablets
125, 250, and 500 mg*
Oral Solution
125 and 250 mg*/5 ml

V-Cillin K®
penicillin V potassium

Description: V-Cillin K is the potassium salt of penicillin V. This chemically improved form combines acid stability with immediate solubility and rapid absorption.

Indications: For the treatment of mild to moderately severe pneumococcal respiratory tract infections and mild staphylococcal skin and soft-tissue infections that are sensitive to penicillin G. See the package literature for other indications.

Contraindication: Previous hypersensitivity to penicillin.

Warnings: Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

Precautions: Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin. [102175]

***Equivalent to penicillin V.**

Additional information available to the profession on request.

Lilly

Eli Lilly and Company
Indianapolis, Indiana 46206

900416

President's Message

Last month, *The Kansas City Star* published some articles on physicians' fees for Medicare patients and listed physicians by name and fee for ten different procedures, including electrocardiograms, chest X-rays and certain surgical procedures. The list was obtained from Blue Shield in Kansas City after a federal judge in the East had ruled that such information should be available to the public under the Freedom of Information Act. The list showed the fees for 1977, which is what Medicare uses for this year's reimbursement formula.

Andrew McCanse, M.D.

The ostensible purpose of the article and of the judge's ruling is to allow patients to seek the least costly medical care by knowing what different physicians charge for the same procedure. That is, the open market will allow competition among physicians for patients, thereby causing fees to be reduced to a minimum.

The main fallacy with this reasoning is that patients seldom care what the actual fee of a surgeon or other physician is for the service; the patient cares whether his or her health insurance will cover the fee. With the advent of usual, customary and reasonable fee schedules by the Blues and other commercial insurors, a record has already accumulated which shows that physicians do not act together in setting fees. There are wide discrepancies among doctors, even among those of very similar training and experience. The Federal Trade Commission has already implicated relative value scales as a vehicle which will encourage price fixing. But the record shows just the opposite.

The problem is compounded by the national labor union contracts, which bind the local Blues to a UCR fee and deters the Blues from correcting inequities among physician-members by setting fixed fee schedules tied to a cost of living index. Many doctors had thought that UCR was the only fair way for the Blues to deal with differences in fees. But now that we all know what the others charge, where is the incentive to hold down the fee? Shouldn't the older established surgeon receive as much compensation for his service as the new surgeon in practice?

We can anticipate more fact finding by our newspapers regarding physicians' fees. The ultimate result is quite likely to be a rise in fees as we evaluate what Medicare will pay to different physicians for the same service.

The Missouri State Medical Association has sponsored a survey of Missourians which shows great satisfaction with their doctors and their care. The survey also showed that our patients are quite concerned with the costs of health care. I urge every physician to consider all of these factors when he or she discovers what our colleagues charge and what adjustments should be made.

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

Lowell G. Bennett
Beltone Hearing Aid Service
318 W. Walnut Street
Springfield, Missouri 65806
(417) 866-0551

Len Gidley
Beltone Kansas City Hearing Aid Service
1001A Grand Avenue
Kansas City, Missouri 64106
(816) 471-1943 (816) 471-4105

Beltone Hearing Aid Service
222 Kirkpatrick Building
St. Joseph, Missouri 64501
(816) 279-6501

Don Hicks
Beltone Hearing Aid Service
North Park Mall
101 Range Line Room 248
Joplin, Missouri 64801
(417) 624-0931

Dean Jones
Beltone Hearing Aid Service
P.O. Box 682 400 E. High
Jefferson City, Missouri 65101
(314) 635-3557

Beltone Hearing Aid Service
21 North 10th
Columbia, Missouri 65201
(314) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Service
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Service
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Service
State Fair Shopping Center
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

Beltone Hearing Aid Service
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Service
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

Beltone Hearing Aid Service
320 Spring
Sweet Springs, Missouri 65351
(816) 335-6727

Beltone WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

MSMA Auxiliary

> *But there's wisdom in women, of more*
> *than they have known.*
> *And thoughts go blowing through them*
> *are wiser than their own.*
> — Rupert Brooke

The AMA Auxiliary Convention will be held on July 22-25 at the Drake Hotel in Chicago.

This year, the MSMA Auxiliary's six delegates and alternates will travel to Chicago to attend the indepth workshops which start on Saturday, July 21. There will be a variety of comprehensive discussions on subjects ranging from legislation to membership. The delegates will participate in five days of workshops and idea exchanges in addition to the official business sessions.

Martin E. Silverstein, M.D. will present a symposium on "Terrorism, Trauma and Disasters." Other programs include Edwin Newman of NBC-TV and Radio whose subject will be "Topic Language" and Marcia Kraft Goin, M.D. and John N. Goin, M.D., who will discuss "Psychological Aspects of Plastic Surgery."

The meetings and workshops offered to the physicians' spouses through the Auxiliary must serve certain purposes. The Auxiliary members must be willing to give their time and energy and be interested and concerned about their spouses' profession.

Mrs. Rudy Ruhling
President

While all physicians' spouses are cordially invited to every AMA Auxiliary function, the annual Missouri Dutch Treat Breakfast is the only event especially for the spouses and friends of Missouri's doctors. It is scheduled for Monday, July 23.

The actions of the House of Delegates are always of great interest because the Auxiliary's directives and programming are predicated upon their decisions.

We honor Dr. Hubert A. Ritter of St. Louis as president of the American Medical Association Educational and Research Fund and offer sincere congratulations.

See you all in Chicago!

in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

AN ANNUAL REPORT on the nation's health, released by HEW, shows record achievements in 1976. The death rate for coronary heart disease fell nearly 28% between 1968 and 1976. Life expectancy for a person born in 1976 is 72.8 years compared to 72.5 a year earlier. Infant mortality in 1976 was 15.2 per 1,000 live births compared to 16.1 a year earlier. The cancer death rate for people under age 45 dropped from 21.8 per 100,000 in 1950 to 14.7 in 1976. The report was compiled by the National Center for Health Statistics and the National Center for Health Services Research.

THE 39TH ANNUAL AMA Congress on Occupational Health will be held in Chapel Hill, N. C., on Oct. 24-26. The conference, co-sponsored by the National Institute for Occupational Safety and Health and hosted by the University of North Carolina, is open to all health professionals and will be of particular interest to part-time occupational physicians. The conference provides up to 12 hours of Category 1 credit toward the AMA Physician's Recognition Award in Continuing Medical Education. Registration fee is $60 for physicians, $40 for allied health professionals. For more information contact the Department of Environmental, Public and Occupational Health, AMA Headquarters.

A SERIES OF open forums designed to help physicians trained in other countries learn more about regulations governing their permission to practice in the U. S. is being sponsored by the AMA's Ad Hoc Committee on Foreign Medical Graduate Affairs. The forums have been held in St. Louis, New York City, Miami and Los Angeles. A fifth session is scheduled for Chicago at the time of the AMA's Annual Meeting in July. For more information, contact Henry Mason, AMA Headquarters.

A PROPOSED RULE to make state medical facilities plans "consistent with" the National Guidelines for Health Planning should be withdrawn, the AMA told HEW. The law requires that an SMFP be consistent with the state health plan, the AMA pointed out, but does not require consistency with the national guidelines. Noting that the national standards "can only lead to 'cookbook' health planning," the AMA said the SMFP rule "seems to be another effort to concentrate control over health care in HEW and to impose top-down planning, contrary to the intent of Congress when it passed PL 93-641 to develop a local planning process responsive to the needs of local communities."

IN A MAILGRAM to state Voluntary Effort committees, state hospital associations and state medical associations, the AMA and the AHA called attention to the January, 1979 increase in hospital expenses resulting from inflation in goods and services hospitals must buy and the increase in patient days, admissions, births, and surgical procedures. "On state level, it's crucial to attack issue of utilization," the mailgram said. "Increase in births and surgical procedures were the highest for any January since 1963. Doctors and hospital chief executive officers must focus immediately on assuring future utilization figures reflect only essential hospitalizations."

HOUSESTAFF PHYSICIANS won a court decision which, in effect, gives them the right under federal law to organize formally and engage in collective bargaining. The U. S. Court of Appeals in Washington, D. C. ruled that the National Labor Relations Board was wrong in 1976 when it decided that interns and residents are students, not employees, and, therefore, not entitled to form unions under protection of the federal law.

PROPOSED RULES on the confidentiality and disclosure of PSRO information need to be tightened, the AMA told HEW's Health Care Financing Administration. In its comments the Association stressed that procedures must not conflict with state laws protecting the rights of patients and that due process must be satisfied before disclosures are made. Under the proposal, a variety of information collected by PSROs could be made available to agencies and individuals.

Dr. Richard V. Bradley Elected MSMA President-Elect

Dr. Bradley

Richard V. Bradley, M.D., St. Louis, was elected president-elect of the Missouri State Medical Association during the 121st Annual Session at the Chase-Park Plaza Hotel on April 19-22.

Dr. Andrew McCanse, Kansas City, was installed as president of the Association at the session.

Dr. Bradley served as vice-chairman of the MSMA Council in 1977-1978 and as chairman the past year. He was elected treasurer of the MSMA in 1975. He was president of the St. Louis Medical Society in 1974 and has served as a delegate to the MSMA.

A member of the Metropolitan St. Louis Medical Society, Dr. Bradley received his M.D. degree at Washington University School of Medicine in 1952. He served his internship and residency at Barnes Hospital in St. Louis, where he was named a fellow in surgery in 1956-1957.

Dr. Bradley's academic appointments have included assistant in surgery, assistant professor and assistant in clinical surgery at Washington University. He is a member of the American Medical Association, Southern Medical Association, St. Louis Surgical Society and American College of Surgeons.

Dr. Bradley is in the private practice of surgery. He and Mrs. Bradley are the parents of two daughters.

Mrs. Rudy Ruhling Installed as President of MSMA Auxiliary

Mrs. Rudy Ruhling, St. Louis, was installed as president of the MSMA Auxiliary at the annual convention held in conjunction with the MSMA Annual Session at the Chase-Park Plaza Hotel in St. Louis on April 19-21.

Other Auxiliary officers elected for 1979-1980 are Mrs. Donald A. Fakhoury, Kansas City, president-elect; Mrs. Vernon Jackson, Fulton, first vice-president; Mrs. Larry Ozenberger, Plattsburg, second vice-president; Mrs. Jerry Meyer, Concordia, third vice-president; Mrs. William H. Goodson, Jr., Kansas City, fourth vice-president; Mrs. James N. Haddock, St. Louis, recording secretary; Mrs. John Erickson, Sedalia, treasurer; Mrs. William Penninger, Springfield, auditor; Mrs. E. E. King, III, Normandy, corresponding secretary; and Mrs. William R. McPhee, Kansas City, parliamentarian.

Mrs. Ruhling has been active in Auxiliary affairs since 1959. She served as president of the St. Louis County Auxiliary for two years and has held numerous offices and chairmanships in both the county and state auxiliaries. She is the first state president from the newly formed St. Louis Metropolitan Medical Society Auxiliary.

In 1977, Mrs. Ruhling was chairman for the MSMA Auxiliary annual convention. In June, 1978, she served as convention liaison officer for the AMA Auxiliary convention in St. Louis. She has served as vice-councilor and is now councilor for the Woman's Auxiliary to the Southern Medical Association.

Active in community affairs, Mrs. Ruhling is on the Board of Directors of the Municipal School of Nursing and a member of the Tuesday Literary Club, Ruth Kelso Renfro Art Appreciation Club, The Deaconess Society and Chaminade Mothers Club.

Dr. and Mrs. Ruhling have five children and 13 grandchildren. Dr. Ruhling is a family practitioner.

The Make

Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were not bioequivalent to reference product. A know, there is substa literature on this sub affecting many drug cluding such antibio as tetracycline and e thromycin. The reco drug recalls and cou actions affirms stron that there are differe among pharmaceuti companies and their products. Research-intensive companies have far better recor than those that do no search and may prac minimum quality as ance.

MYTH: Industry favor only "expensive" bran names and denigrates generics.

FACT: PMA compan make 90 to 95 perce the drug supply, incl ing, therefore, most generics. Drug nome clature is not the imp tant point; it's the co tence of the manufac turer and the integri the product that cou

Matters.

TH: Generic options al-
st always exist.

T: About 55 percent
rescription drug ex-
nditure is for single-
rce drugs. This
ans, of course, that for
y 45 percent of such
enditure, is a generic
scribing option avail-
le.

TH: Generic
scriptions are filled with
pensive generics, thus
ing consumers large
s of money.

T: Market data show
t you invariably
scribe—and pharma-
s dispense—both
nd and generically
eled products from
wn and trusted
rces, in the best inter-
of patients. In most
es the patient receives
roven brand product.
ings from voluntary
nandated generic
scribing are grossly
ggerated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

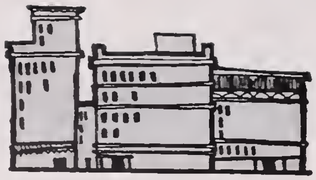
We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

PMA

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



NEWS From the Medical School

UNIVERSITY OF MISSOURI-KANSAS CITY

Dr. Hsu Chia-yu, a native of Shanghai and deputy chief of internal medicine at the Jui Chin Hospital in that city, joined the faculty of the School of Medicine (UMKC) on May 1 as the first Edgar Snow Professor. The Snow Professorship was established to honor Edgar Snow and perpetuate the memory of the contributions he made as a recorder and participant in Far East affairs at a crucial time in history.

Dr. Hsu's appointment is for six months. He is one of the first physicians from mainland China to join an American university in a faculty position since the recognition of the People's Republic by the United States last December. Dr. Hsu's visit has the endorsement of the Chinese Medical Association through which his invitation to come here was issued.

Dr. E. Grey Dimond, provost for health sciences, said that in addition to Dr. Hsu's teaching, the 53-year-old physician will study the American system of medical education, particularly UMKC's six-year program.

Dr. Hsu will work with *Dr. Edward Twin*, former executive director of Truman Medical Center, in observing activities of students assigned to the Gold Docent Team at the school. His excellent command of English and his vast knowledge in the field of medicine will enable him to make a distinctive contribution to medical education as both a teacher and a student.

Dr. Hsu Chia-yu is no stranger to Kansas City. He visited here in 1972 with a group of touring Chinese physicians. In addition, a number of prominent Kansas Citians were among those he guided on a visit to the People's Republic of China last summer. They included former Jackson County Executive *Mike White; Charles E. Curry*, former presiding judge of the Jackson County Court; *Dr. James C. Olson*, president of the University of Missouri system; *UMKC Chancellor George A. Russell;* and *Dr. Harry S. Jonas*, dean of the UMKC School of Medicine. Many of this group greeted Dr. Hsu when he arrived at Kansas City International Airport on April 30.

Dr. Carl R. Noback, UMKC School of Medicine class of 1977, was awarded first place at the recent April Midwest Anesthesia Residents Conference in Chicago.

Dr. Noback reported on "Effects of Heat Dosage, Air Temperature, Warming Blankets an Nitroprusside on Adequacy of Re-warming During and After Cardiopulmonary By-Pass in Man. This work was carried out with *Dr. John H. Tinke* at the Mayo Clinic where Dr. Noback is a senio fellow in anesthesiology.

Those who attended the conference were fro Indiana, Illinois, Wisconsin, Minnesota, Iowa Missouri, Michigan, Nebraska, the Dakotas an Kansas.

ST. LOUIS UNIVERSITY

Terry Moore, M.D., assistant professor o internal medicine, Division of Rheumatology, ha been granted a three-year $120,000 clinical investigatorship award by the National Institute of Arthritis, Metabolic and Digestive Disease Sectio of the National Institutes of Health for his research in Juvenile Rheumatoid Arthritis (JRA).

To date, there is no laboratory test for use b the general pediatrician to identify JRA. The hidden 19S rheumatoid factor has been found i about 80% of children with JRA, according to Dr Moore.

Through his research, Dr. Moore hopes t further isolate and study this hidden rheumatoi factor, with the ultimate goal of finding the lymphocyte that secretes the hidden rheumatoid factor and determining what stimulates it to do so.

Dr. Moore presented a paper on this subjec at the American Rheumatism Association's annu scientific meeting on May 31-June 1 in Denver Colo.

The Francis and Doris Murphy Neuroanatom Laboratory was recently dedicated at the Schoo of Medicine through a donation from *Michael G* *Murphy*, M.D. The electrophysiological and surgical equipment for the laboratory was donated i his parents' name.

Dr. Murphy, a 1964 graduate of the School Medicine, is a neurosurgeon and assistant clinic professor of both surgery and anatomy at th school. He is in private practice in Belleville, Ill

Jerrold S. Petrofsky, Ph.D., assistant profess f physiology, has been awarded a $35,045 grant y the National Institutes of Health for his reearch in trying to develop a microprocessorontrolled stimulator to restore standing and alking to paralyzed animals with the eventual im of restoring these activities in paralyzed man.

Stewart G. Albert, M.D., assistant professor of ndocrinology, is the recipient of a $10,000 grant rom the American Diabetes Association for his esearch titled "Biosynthesis of Proinsulin Preursors in Intact Cells." His research will analyze he mechanism of insulin synthesis by using isoated pancreatic islets. Diabetes may be a defect n the ability to sense glucose, a defect in the bility of the cell to make insulin or a defect in the enes that control insulin production.

Dr. Albert plans to analyze the mechanisms sed by the islets to produce insulin and to valuate the genetic control of insulin synthesis in n effort to better understand and treat diabetes.

Mary F. Ruh, Ph.D., associate professor of hysiology, has been awarded a $34,806 grant by he Department of Health, Education and Welare for research on how hormones may effect ncontrolled growth and cancer in humans. Dr. uh's work is now in its fifth year of funding. It enters on how hormones in silkmoths interact nd affect the growth and characteristics of that nsect's cells. Since it is already known that hornone treatment can prevent or delay the growth nd change in the form of silkmoths, it is hoped hat study of this process will provide information elatable to man.

NIVERSITY OF MISSOURI-COLUMBIA

Dr. Frank Mitchell, professor of surgery and irector of emergency medical service at the edical Center, has received the 1979 Trauma chievement Award given by the committee on rauma of the American College of Surgeons ACS).

Each state has a chairman who serves on the CS's committee on trauma (injury, wound, hock). Dr. Mitchell, chairman for Missouri, reeived the award for having the outstanding mergency medical service (EMS) program in the ation.

The EMS program for training ambulance atendants for the state was initiated at the Univerity Medical Center about 11 years ago through a rant from the Missouri Division of Highway afety and the U. S. Department of Transportaion. At that time, few rural communities were erved by ambulance attendants trained in proper emergency care at the site of an accident or for emergency illness such as a heart attack.

Today, there are more than 9,000 licensed emergency medical technicians in Missouri. Seven thousand of them were trained throughout the state by the University Medical Center staff between 1968 and 1977. The Medical Center now offers programs for Columbia and surrounding area, but primarily the EMS office is involved in curriculum development and evaluation of programs conducted by the Bureau of Emergency Medical Services of the Division of Health.

Ambulance service began at the Medical Center in 1968 and soon became nationally recognized as a model for emergency care. A van-type vehicle was designed to carry the latest in emergency equipment which included a complete cardiac unit with heart-wave monitor, defibrillator and pacemaker, a heart-lung resuscitator, backboard for spinal cord injuries, intravenous fluids and hydraulic jacks to extricate the injured from accidents.

The Medical Center has a staff of seven full-time and five part-time advanced paramedics who are on 24-hour shifts. They serve Boone County with ambulance service and answer mutual aid calls outside the county when necessary.

Dr. Elizabeth James, director of perinatal medicine at the Medical Center, has received the 1979 Alumnae Anniversary Fund Award. The $1,000 award was established for an outstanding woman faculty member on campus at the time of the 100th anniversary of the admittance of women to the University. The award cites Dr. James as "teacher, professional woman, humanitarian and healer . . . with selfless dedication to the development of the University's Newborn Intensive Care Unit.

Dr. James, a pediatrician who has helped save hundreds of high-risk babies, is a new mother herself. She and her husband, Dr. Ronald James, adopted a baby daughter in December.

Dr. Larry Millikan, associate professor of dermatology, was a visiting professor at the Irish Association of Dermatologists in Belfast recently. While abroad, he also was a visiting professor at St. John's Hospital in London.

Dr. William D. Bradshaw has been elected as the central states' representative to the Society of Medical College Directors of Continuing Medical Education. Regional representatives and officers of the society constitute the executive committee which is charged with supervision of the society's affairs between business meetings.

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: Alta Bingham

Aug. 2-4	Symposium: Management of Medical Problems in Athletes (Four Seasons, Colorado Springs)
Sept. 28-29	The Long Weekend: Management of Patients With Critical Illness
Nov. 1-3	Annual Fall Clinical Conference — Kansas City Southwest Clinical Society
Dec. 6-8	The Heart 1979

Missouri Chapter, American College of Surgeons
Box 1268, Columbia 65205
(314) 449-4518

June 22-23	Annual Professional Meeting (Alameda Plaza, Kansas City)

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
Contact: Loretta Giacoletto

Aug. 6-8	Pediatric Neurology: Recent Advances in the Diagnosis and Treatment (Smuggler's Notch, Vermont)
Nov. 9-11	Sixth Annual Symposium: Anesthesia and the Geriatric Patient

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: Erich W. Pollak, M.D., F.A.C.S., Director of Surgical Education

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds
First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds

University of Missouri School of Medicine Office of Continuing Education
M-233 Medical Center, Columbia 65212
(314) 882-2256
Contact: William D. Bradshaw, M.D.

Aug. 2-3	Second Annual Sports Medicine Symposium
Aug. 9-10	Workshop in Soft Tissue Surgery
Sept. 14-16	Mid-Continent Psychiatric Association 31st Meeting (Tan-Tar-A, Lake Ozark)
Sept. 15	Mini Melanoma Symposium
Sept. 20-21	Infection Control
Oct. 12-13	Basic Neurology
Oct. 26-27	Advances in Rheumatology

Kansas City Society of Ophthalmology and Otolaryngology
30306 Gillham Rd., Kansas City 64108
(816) 531-8432
Contact: Ron Cosens, Executive Director

Dec. 6-7	Annual Clinical Meeting (Hilton Plaza Inn)

St. Joseph Memorial Hospital
3rd Street and 1st Capital Dr.
St. Charles 63301
(314) 946-6811
Contact: Gerald J. Duling, M.D., Medical Director

June 19	Pathologists' Seminar
June 21	Tumor Board
June 26	Intravenous Hyperalimentation
June 28	Tumor Board
July 5	Tumor Board

Mercy-Baptist Eye Seminars
615 S. New Ballas Rd., St. Louis 63141
Contact: Richard B. Oglesby, M.D.

Oct. 21	Eighth Eye Seminar: New Techniques in Ophthalmology

Iowa Medical Society
1001 Grand Ave.
West Des Moines, Iowa 50265
(515) 223-1401
Contact: Tina Preftakes

June 18-20	1979 Scientific Session (Tan-Tar-A Resort, Osage Beach)

In Edema* or Hypertension* when potassium balance is a concern...

Potassium-Sparing

DYAZIDE®

ach capsule contains 50 mg. of Dyrenium® (brand of triamterene)
nd 25 mg. of hydrochlorothiazide.

Makes Sense

n Edema

The triamterene in 'Dyazide' limits potassium loss and provides an dditive diuretic effect to that of the hydrochlorothiazide component.

n Hypertension

As the hydrochlorothiazide in 'Dyazide' lowers blood pressure, the riamterene component limits potassium loss.

erum K^+ and BUN should be checked periodically

articularly in the elderly, diabetics, and those with suspected or confirmed enal insufficiency (see Warnings). If hyperkalemia develops, substitute a iazide alone.

Before prescribing, see complete prescribing information in SK&F Co. literature or *PDR*. A brief summary follows:

* **WARNING**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
a SmithKline company

SK&F CO.
Carolina, P.R. 00630

When painful spasm
is the presenting
symptom...

n the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

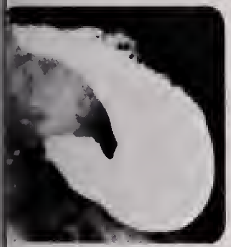
0 mg. capsules, 20 mg. tablets,
0 mg./5 ml. syrup, 10 mg./ml. injection

elps control abnormal motor activity with minimal anticholinergic side effects†

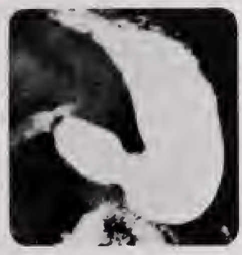
emonstrated smooth muscle relaxant activity.

n this double-blind study, twenty patients having G.I. series and exhibiting pasm were randomly selected to receive either 2 cc. of Bentyl or sodium hloride intramuscularly. Ten minutes after the injection another radiograph vas taken . . .

. . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride roduced relaxation in only 3 of 10. No side effects occurred in either group of patients.



ylorospasm has
lmost totally blocked
assage of barium
neal.



Barium meal beginning
to pass 10 minutes
after intramuscular
injection of 20 mg. Bentyl.

The correlation of spasm relief and drug given was excellent."

This drug has been classified "probably" effective in treating unctional bowel/irritable bowel syndrome.

See Warnings, Precautions and Adverse Reactions.

ee following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with. Autonomic neuropathy Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension, loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting, impotence; suppression of lactation; constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg. capsule and syrup: *Adults*. 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg., *Adults:* 1 tablet three or four times daily. Bentyl Injection: *Adults*. 2 ml. (20 mg.) every four to six hours intramuscularly only NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE. The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A

Merrell

MERRELL NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215 U S A

Component Society News

FIRST DISTRICT

COUNCILOR
RICHARD C. HEDGES, M.D.,
N. KANSAS CITY

BUCHANAN COUNTY MEDICAL SOCIETY

For the 27th consecutive year, members of the Buchanan County Medical Society and Northwest (Mo.) Dental Society held a joint dinner meeting and program. The event was held at the Moila Club in St. Joseph on May 2.

Presiding jointly were the organization presidents: Dr. Carl K. Ness, Medical Society and Dr. C. Keith Schmitt, Dental Society.

The speaker was Harold G. Muchmore, M.D., professor of pulmonary diseases at the University of Oklahoma Resources Center. His subject was "Anerobic Infections."

Dr. Muchmore is an outstanding researcher in anerobic organisms and treatment of infections. He travels to the Antarctic annually to do research investigations of immunology. He was introduced by Dr. Robert M. Spurgat, his pupil when both were at the University of Minnesota.

ROBERT R. STUBER, M.D., *Secretary*

FIFTH DISTRICT

COUNCILOR
H. PETER EKERN, M.D., MEXICO

LAKE OF THE OZARKS MEDICAL SOCIETY

The third meeting of the Lake of the Ozarks Medical Society was held at the Lake of the Ozarks General Hospital on March 19.

Members present were Chris K. Fotopolous, M.D., Kenneth Ridgeway, D.O., Robert Lyle, M.D., Norbert L. Kirk, D.O., V. Dale Vandiver, M.D., Donald B. Holley, M.D., C. Haggerty, D.O., Ruth Kauffman, M.D., James Coy, D.O., M. R. Hayden, M.D., T. W. Garrison, M.D. and Henry D. Petry, D.O.

Dr. Mark Finley of the Kansas University Medical Center gave an excellent presentation on chronic obstructive pulmonary disease.

There was an open discussion on Resolution #5 pertaining to the physician's assistants program. It was voted that the Society's two delegates to the MSMA vote against the resolution.

The next meeting will be a dinner meeting at the Lake of the Ozarks General Hospital on April 16. The next continuing medical education discussion will be on hypertension by Dr. Bower of the University of Missouri School of Medicine.

M. R. HAYDEN, M.D., *Secretary*

New Members

L. Arden Almquist, M.D., Baptist Memorial Hospital, 6601 Rockhill, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Almquist is a native of Nome, Alaska, eceived his preliminary education at Clark University and his M.D. degree at the University of Kansas in 1950. He specializes in family practice.

Terrence A. Bidnick, M.D., Western Electric Co., Medical Dept., 777 N. Blue Parkway, Lee's Summit 64111, has become a member of Jackson County Medical Society. Dr. Bidnick is a native of Kansas City, received his preliminary education t Kansas University and his M.D. degree at Kanas University in 1975. He specializes in occupaional medicine.

C. J. Borkar, M.D., Dept. of Anesthesia, Children's Mercy Hospital, 24th and Gillham Rd., Kansas City 64108, has become a member of ackson County Medical Society. Dr. Borkar is a native of Bombay, India, received his preliminary education at the University of Bombay and his M.D. degree at Grant Medical College in 1969. He specializes in anesthesiology.

Lolita Montano Canoy, M.D., Ellis Fischel State Cancer Hospital, 115 Business Loop 70 West, Columbia 65201, has become a member of Boone County Medical Society. Dr. Canoy is a native of Manila, Philippines, received her preiminary education at the University of the Philippines and her M.D. degree at the Univerity of the Philippines in 1953. She specializes in obstetrics and gynecology.

Marvin C. Cohen, M.D., 7521 Booth Dr., Shawnee Mission, Kan. 66208, has become a member of Jackson County Medical Society. Dr. Cohen is a native of Jacksonville, Fla., received his preliminary education at Kansas University and his M.D. degree at Kansas University in 1974. He specializes in general surgery.

Stuart G. Shanker, M.D., 373 West 101st Terrace, Kansas City 64114, has become a member of ackson County Medical Society. Dr. Shanker is a native of St. Louis, received his preliminary education at Indiana University and his M.D. degree at the University of Missouri in 1975. He specializes in pediatrics.

Ronald W. Stitt, Jr., M.D., 300 Highland Professional Tower, 6724 Troost, Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Stitt is a native of Kansas City, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1974. He specializes in orthopedic surgery.

Nora C. Umali-Sessoms, M.D., Highway 61, Crystal City 63019, has become a member of Jefferson County Medical Society. Dr. Umali-Sessoms is a native of the Philippines, received her preliminary education at the University of Santo Tomas and her M.D. degree at the University of Santo Tomas in 1967. She specializes in anesthesiology.

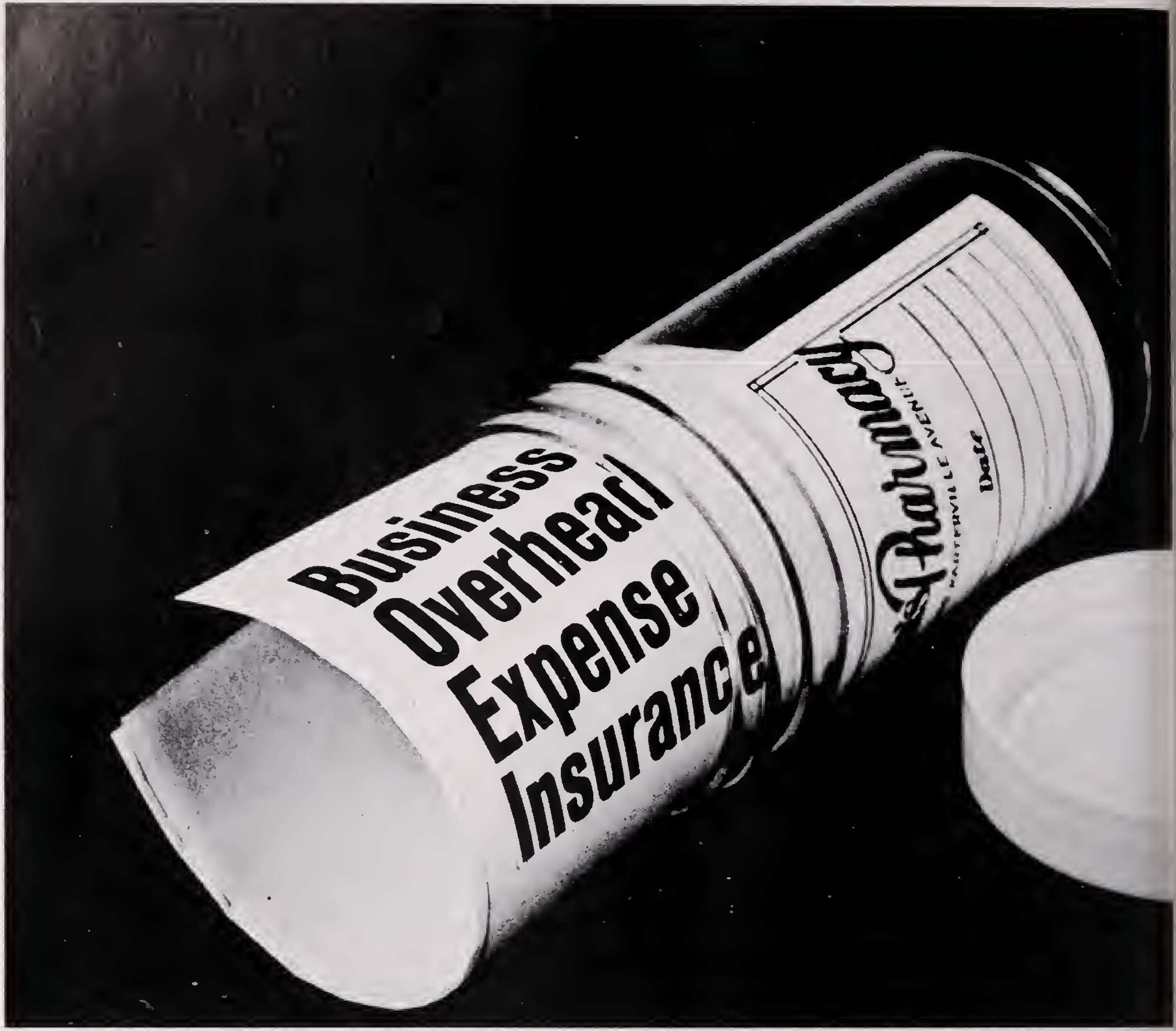
Luis R. Visot, M.D., Rusk Rehabilitation Center, Columbia 65202, has become a member of Boone County Medical Society. Dr. Visot is a native of Puerto Rico, received his preliminary education at Marquette University and his M.D. degree at the Universidad Nacional Autonoma de Mexico in 1954. He specializes in physical medicine and rehabilitation.

Howard Glenn Welgus, M.D., 109 Old Oak, Ballwin 63011, has become a member of St. Louis Metropolitan Medical Society. Dr. Welgus is a native of Brooklyn, N. Y., received his preliminary education at Rice University and his M.D. degree at Washington University in 1977. He specializes in dermatology.

William Haller Woodson, M.D., VA Medical Center, Poplar Bluff 63901, has become a member of Butler-Wayne-Ripley-Carter County Medical Society. Dr. Woodson is a native of Fincastle, Va., received his preliminary education at Roanoke College and his M.D. degree at Medical College of Virginia in 1943. He specializes in orthopedic surgery.

In Memoriam

Robert W. Bartlett, M.D., 6459 Wydown Rd., St. Louis 63105; a graduate of the University of Michigan, 1930; member of St. Louis Metropolitan Medical Society; aged 74; died April 4, 1979.



A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

INDEX TO ADVERTISERS

They Help Make MISSOURI MEDICINE *Possible*

ltone Electronics 332
rroughs Wellcome 312
ed S. James & Co. of Missouri, Inc. 344
Lilly & Company 330
ma Linda 305
ead Johnson Pharmaceutical Division . Insert (324-325)
edical Defense Associates, Ltd. 309
edical Protective Company 328
erck Sharp & Dohme 308
Merrell-National Laboratories
...... 308, Insert (308-309), Insert (340-341), 341, 342
MOMEDICO 302
Munns Medical Supply 304
Pharmaceutical Manufacturers Association ... 336 & 337
Purepac 329
Roche Laboratories 303, 347, 348
Smith Kline & French .... Insert (340-341)
The Upjohn Company .... Insert (308-309)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

SPEN MUSHROOM CONFERENCE — Identification of lible, poisonous and hallucinogenic mushrooms. Treatent of mushroom poisoning. Microscopy. Novice and adnced courses. AMA Category I. July 29-August 3, 1979. 'ildwood Inn, Snowmass-at-Aspen, Colorado. Contact: eth Israel Hospital, 1601 Lowell Blvd., Denver, CO 80204. 03) 825-2190, Ext. 550.

'. LOUIS: EMERGENCY MEDICINE — Work available onday-Friday days only; full time or part time; paid profesnal liability; flexible schedule; Missouri license required. ll PPG's Laury Kamp at 314-878-2280.

IYSICIANS WANTED FOR ST. CHARLES COUNTY Hybrid primary care emergency medicine opportunity in w health care facility. Walk-up, after-hours clinic and first l facility in western St. Charles County as alternative to mergency Department utilization. Evening and eekend. May alternate with Emergency Department posin at St. Joseph Hospital. Excellent compensation. Contact erald J. Duling, M.D., Medical Director, St. Joseph Hostal, St. Charles, Mo. 63301. (314) 946-6811.

FAMILY PRACTICE — Solo Board Certified family practitioner is seeking a family practice associate in growing community 6 miles north of Kansas City International Airport. Contact, Carl M. Myers, M.D., Platte Medical Clinic, Platte City, Mo. 64079. (816) 431-2200.

WANTED — Used surgical, medical equipment in good condition or hospital surplus. Private party. Write: 12128 Hibler Dr., Creve Coeur, Mo. 63141.

WANTED — Used (1) x-ray and Fluro at least 500 m.a.p., (2) hydrolic operating table, (3) anesthesia machine. Equipment should be in good working condition. Private party. Write: 12128 Hibler Dr., Creve Coeur, Mo. 63141.

WANTED — House physician for 200-bed hospital to do internal medicine. Prior experience necessary and state license required. Contact Administrator, Compton Hill Medical Center, 1755 South Grand, St. Louis, Mo. 63104.

WANTED: OLD X-RAY VIEW BOX — Write to H. Neal Grannemann, M.D., 1000 West 10th, Rolla, Mo. 65401.

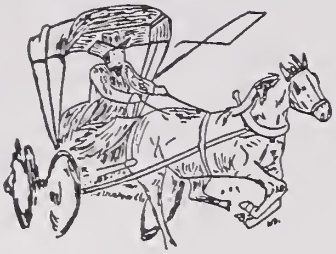
VACATION HOME — Tan-Tar-A Estates, Lake Ozark, Mo. On golf course. 3 BR, 2½ Ba, A/C, fully equipped kitchen, W/D, Sleeps 12. Ideal large family or four couples. All sport facilities available. Seasonable rates. F. A. O'Connell, M.D., 7830 State Line, Shawnee Mission, Kan. 66208. (913) 381-0886.

EMERGENCY MEDICINE: ST. LOUIS AREA — Opportunities available immediately in some of the busiest and fastest growing Emergency Rooms in the metropolitan area. Remuneration ranging from $50,000 to $62,000 by covering 48-60 hours per week. $5 million paid malpractice provided. Call 1-800-325-3982, toll free, 1-314-878-2280 in Missouri; or send CV to Tom Cooper, M.D., 970 Executive Parkway, #101, St. Louis, Mo. 63141.

For MSMA Impaired Physician Program Assistance,

Call 314-636-5744

24-Hour Telephone Answering Service. Calls Are Confidential.



Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

Program participants at the April 19 meeting of the St. Louis Surgical Society were Drs. Robert Elman, Evarts A. Graham, Brian Blades, Peter Heinbecker, J. Albert Key and John F. Patton of St. Louis.

In his talk before the Saline County Medical Society on Jan. 9, 1939, D. F. Manning, M.D. of Marshall, said:

"In my opinion, government has already gone far beyond its legitimate province in the practice of medicine, and largely in obedience to political influences. . . . The high cost of medical care is not rightly chargeable to the fees we require for services, yet we are made to bear the odium of it all and have become the football for political opportunists. The real burden lies in the expenses of hospitalization, laboratory requirements, nurses' services and pharmaceutical necessities such as biological products, sera and antitoxins. Let the attack be made on the real culprits, if culprits there be, rather than strike at the very tap root of efficiency and thus destroy or weaken the whole structure. . . ."

TWENTY-FIVE YEARS AGO

Two new department heads have been chosen at the University of Missouri School of Medicine. Robert L. Jackson, M.D., professor of pediatrics at the Iowa University School of Medicine, has been appointed professor and chairman of the Department of Pediatrics, effective September 1. Dr. Jackson is a national authority on growth, metabolism, nutrition and, especially, diabetes.

Clarence D. Davis, M.D., Department of Obstetrics and Gynecology at Duke University School of Medicine, has been appointed professor and chairman of the Department of Obstetrics and Gynecology, effective July 1. He is a recognized authority on endocrine gynecology and is pursuing research in psychosomatic gynecology and infertility.

In his address to the Pettis County Medical Society on March 17, Roland S. Kieffer, M.D., of St. Louis said:

"Historically, I should like to remind you th more than 75 years ago, a determined effort w made to abolish the United States Patent Offi on the grounds that everything that could be ha already been patented. I recall hearing, in 1922 the American College of Surgeons, the late D Milliken, the renowned physicist, say that in h graduate days, he was advised by his scienti friends to forsake the study of physics, a stat science, not worthy of his great talents."

The first chewing gum was patented in 1869 a dentist, W. T. Semple. It was promoted as dentrifrice.

TEN YEARS AGO

The 111th Annual Session of the MSMA w held on March 20-23, 1969 at The Chase-Pa Plaza Hotel in St. Louis with 1,217 persons takin part in the various events.

Dr. Doyle C. McCraw, Bolivar, was installed the 1969-1970 president succeeding Dr. David Kerr of St. Louis. Other elected officers include Vice-Presidents Charles H. Lewellen Louisiana, Dillard M. Eubank of Kansas City an Walter W. Tillman of Springfield. President-ele is Dr. Joseph L. Fisher of St. Joseph.

Mrs. James A. Reid, Marshall, was electe president of the Woman's Auxiliary to the MSM at its meeting held concurrently with the Annu Session in St. Louis. Mrs. Reid received her B. degree in Home Economics from Kansas Stat University and her B.S. degree in Nursing fro the Kansas University Medical Center.

Mr. Jim Reed of the AMA says that phraseolog is important for doctors, too. We should refer the doctor's outer office as a "reception room. Use the term "medical profession" rather tha "organized medicine."

Dr. Max P. Pepper, associate professor of pub lic health and psychiatry at Yale University Schoo of Medicine, has been named professor an chairman of the Department of Communit Medicine at the St. Louis University School o Medicine.

fore prescribing, please consult complete product information, a mmary of which follows:

e effectiveness of Valium (diazepam) in long-term use, that is, more than onths, has not been assessed by systematic clinical studies. The sician should periodically reassess the usefulness of the drug for the vidual patient.

ntraindications: Tablets in children under 6 months of age; known persensitivity; acute narrow angle glaucoma; may be used in patients n open angle glaucoma who are receiving appropriate therapy

rnings: As with most CNS-acting drugs, caution against hazardous oc- pations requiring complete mental alertness (*e.g.*, operating machinery, ving). Withdrawal symptoms (similar to those with barbiturates, alcohol) ve occurred following abrupt discontinuance (convulsions, tremor, dominal/muscle cramps, vomiting, sweating). Keep addiction-prone indi- uals (drug addicts or alcoholics) under careful surveillance because of disposition to habituation/dependence.

> ***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

AL Advise patients against simultaneous ingestion of alcohol and other S depressants.

of value in treatment of psychotic patients; should not be employed in of appropriate treatment. When using oral form adjunctively in convul- e disorders, possibility of increase in frequency and/or severity of grand seizures may require increase in dosage of standard anticonvulsant dication; abrupt withdrawal in such cases may be associated with tem- ary increase in frequency and/or severity of seizures

ECTABLE *To reduce the possibility of venous thrombosis, phlebitis, local ation, swelling, and, rarely, vascular impairment when used I.V.: inject wly, taking at least one minute for each 5 mg (1 ml) given; do not use all veins,* i.e., *dorsum of hand or wrist; use extreme care to avoid intra- erial administration or extravasation. Do not mix or dilute Valium with er solutions or drugs in syringe or infusion flask. If it is not feasible to inister Valium directly I.V., it may be injected slowly through the infusion ng* as close as *possible to the vein insertion.*

ninister with extreme care to elderly, very ill, those with limited pulmo- y reserve because of possibility of apnea and/or cardiac arrest; con- itant use of barbiturates, alcohol or other CNS depressants increases ression with increased risk of apnea; have resuscitative facilities avail- e. When used with narcotic analgesic eliminate or reduce narcotic dos- at least 1/3, administer in small increments. Should not be administered patients in shock, coma, acute alcoholic intoxication with depression of l signs.

s precipitated tonic status epilepticus in patients treated for petit mal us or petit mal variant status.

ndrawal symptoms (similar to those with barbiturates, alcohol) have oc- red following abrupt discontinuance (convulsions, tremor, abdominal/ scle cramps, vomiting, sweating). Keep addiction-prone individuals ler careful surveillance because of predisposition to habituation/ endence. Not recommended for OB use

cacy/safety not established in neonates (age 30 days or less); pro- ged CNS depression observed. In children, give slowly (up to 0.25 /kg over 3 minutes) to avoid apnea or prolonged somnolence; can be eated after 15 to 30 minutes. If no relief after third administration, propriate adjunctive therapy is recommended.

cautions: If combined with other psychotropics or anticonvulsants, efully consider individual pharmacologic effects—particularly with known npounds which may potentiate action of Valium (diazepam), *i.e.*, enothiazines, narcotics, barbiturates, MAO inhibitors and antidepres- ts. Protective measures indicated in highly anxious patients with ac- npanying depression who may have suicidal tendencies. Observe usual cautions in impaired hepatic function; avoid accumulation in patients compromised kidney function. Limit oral dosage to smallest effective ount in elderly and debilitated to preclude ataxia or oversedation (ini- y 2 to 2½ mg once or twice daily, increasing gradually as needed or rated)

INJECTABLE Although promptly controlled, seizures may return; readminister if necessary; not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures; use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, have been observed in patients during and after Valium (diazepam) therapy and are of no known significance.

INJECTABLE Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm, pain in throat or chest have been reported.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure; employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension, caffeine and sodium benzoate for CNS-depressive effects. Dialysis is of limited value.

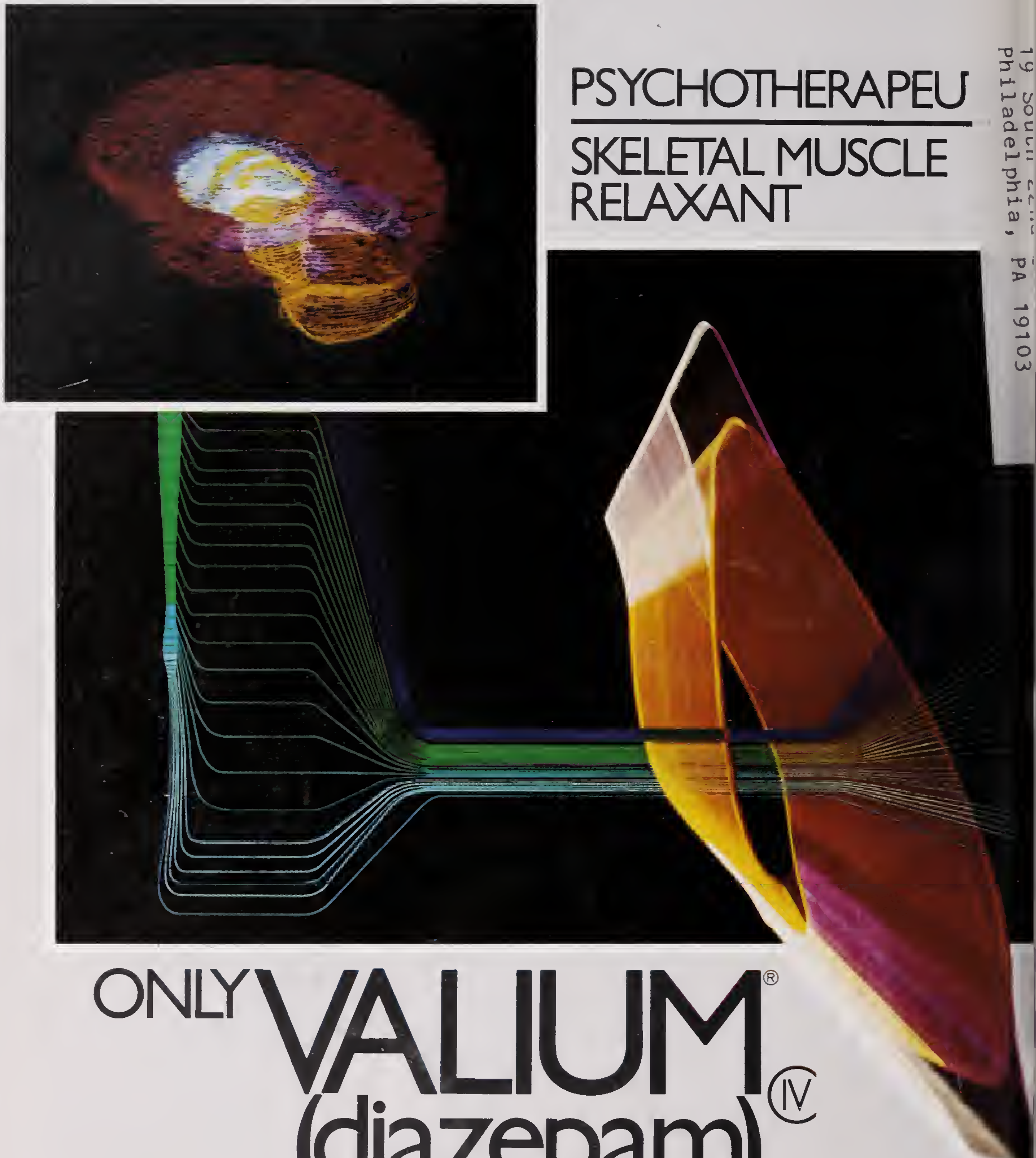
Supplied: Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500; Tel-E-Dose® (unit dose) packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Ampuls, 2 ml, boxes of 10; Vials, 10 ml, boxes of 1; Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

2-MG, 5-MG, 10-MG SCORED TABLETS
TEL-E-DOSE® REVERSE-NUMBER PACKS
2-ML TEL-E-JECT® DISPOSABLE SYRINGES
2-ML AMPULS
10-ML VIALS
5 MG/ML
VALIUM
5 mg

ONLY VALIUM® (diazepam) GIVES YOU THIS CHOICE OF DOSAGE FORMS AND FLEXIBILITY



PSYCHOTHERAPEU

SKELETAL MUSCLE
RELAXANT

ONLY VALIUM®
(diazepam) Ⓒ
HAS THESE TWO DISTINCT EFFECTS

Please see preceding page for a summary of product information. ROCHE

19 South
Philadelphia, PA 19103

Missouri Medicine

Vol. 76, No. 7 (ISSN 0026-6620) July, 1979

Special Report

LIBRA OF THE
COLLEGE PHYSICIANS
OF PH DELPHIA
AU -1979 MDS

121st ANNUAL SESSION

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
AUG 6 - 1979

Missouri State Medical Association

Contents • Page 353

Only one insurance company is backed by the Missouri State Medical Association. Momedico®. The better way.

Your present professional liability insurance probably covers you for everything you can think of. But think of what more your insurance company should do for you. Special needs you may have, lower premiums on your policy, service and assistance as well as coverage. And a voice in setting company policies and direction. That's why Momedico has a better way.

Doctors in the insurance business.

Today, more than 80,000 physicians in the United States carry professional liability protection through their own insurance companies. There are 19 such companies sponsored by state or local medical societies. More than 40 doctor-owned companies and trusts are either operational or on the drawing boards.

Formed by Missouri doctors, for Missouri doctors.

Here at home, physicians found adequate insurance protection lacking. And so, Momedico was formed by the Missouri State Medical Association. This stock insurance company is licensed and regulated the same as all other stock insurance companies in Missouri. In unity there is strength, and nowhere can you find more strength in your protection than in this doctor-directed company. All are fellow physicians.

Lower premiums. More flexible coverage.

Everyone promises low premiums. Momedico delivers on that promise because our operating expenses are lower than commercial insurers. We don't have to pay stockholders who are interested in profit, not protection. We can design a policy to meet your needs, your practice. Our unique status directly benefits you. If the premiums we collect are more than is needed, they can be returned to you through a participating provision. One more benefit: you pay no deductible.

And still your money earns.

All insurance companies must establish substantial reserves. Momedico is no exception. It's what we do with the earnings on this money that makes Momedico a better way. The invested earnings accrue to your benefit, and every other doctor who is a member of the company. Commercial insurance companies retain these earnings for their benefit. Not Momedico.

The best defense is a good lawyer.

Nobody wants to end up in court. If you do, you'll be glad Momedico is behind you. We'll do everything proper and possible to protect your interests. We have retained the top-rated claims attorneys who work for some of the country's largest insurance companies. We'll also help provide the best expert witness assistance. By joining Momedico, you can help keep closer control of claims settlements. And you don't pay hidden legal fees.

Strong and growing.

All of our policy contracts are backed by prominent American insurance companies that specialize in medical underwriting. The company is financially healthy, and structured to maintain that health along with growth. In the short time since Momedico was created by the Missouri State Medical Association, over six hundred physicians have become policyholders. And more join every day.

John N. Martin, M.D.
President, Missouri State Medical Assoc.

"As a fellow physician, and a policyholder of Momedico, I enthusiastically endorse this professional liability program. It has been designed by doctors, for doctors. I invite you to learn more about this protection from Momedico."

Mail this coupon today. Find out why Momedico and the Missouri State Medical Assoc. have a better way to protect you.

Yes, I would like to know more about professional liability insurance with Momedico.

MOMEDICO®
Better Protection. Together.
Sponsored by the Missouri State Medical Association

☐ Have your agent call me. ☐ Send me more information, please.

NAME ____________________

ADDRESS ____________________

CITY/RFD ____________________

ZIP __________ PHONE # __________

Mail to:
Momedico, 100 North Broadway, St. Louis, MO 63102 or call (314) 241-4774

A character all its own.

Valium (diazepam/Roche) is a benzodiazepine with a character all its own. Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® Ⓘⓥ
diazepam/Roche
2-mg, 5-mg, 10-mg scored tablets
a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Donald Judd, M.D., St. Louis, *Alternate*
Rae W. Froelich, M.D., Lebanon
George Bohigan, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
  Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
  Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
  Richard H. Fallon, M.D., St. Louis
  James M. Stokes, M.D., St. Louis
  J. Otto Lottes, M.D., St. Louis
  Theodore L. Paletta, M.D., St. Louis
  Frederick D. Peterson, M.D., St. Louis
  Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
  Vice-Councilor, Paul H. Rother, M.D., St. Charles
5th District, H. Peter Ekern, M.D., Mexico
  Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
  Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
  Donald McIntosh, M.D., Kansas City
  Ronald A. Youmans, M.D., Kansas City
  Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
  Marvin A. Singleton, M.D., Joplin
  Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
  Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
  Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Information for Contributors

Articles are accepted for publication on condition tha they are contributed solely to this journal. Material ap pearing in MISSOURI MEDICINE is protected b copyright.

Manuscripts should be submitted to the editor, Wilfre E. Wooldridge, M.D., P.O. Box 1028, 113 Madison Jefferson City, Mo. 65102. The transmittal letter shoul designate one author as correspondent and include hi address and telephone number.

In addition, in view of *The Copyright Revisio Act of 1976*, effective Jan. 1, 1978, transmittal let ters to the editor should contain the following lan guage: "In consideration of the Missouri Stat Medical Association's taking action in reviewin and editing my submission, the author(s) under signed hereby transfers, assigns or otherwise con veys all copyright ownership to the MSMA in th event that such work is published by the MSMA. We regret that transmittal letters not containin the foregoing language signed by *all* authors of th submission will necessitate delay in review of th manuscript.

Manuscripts should be typewritten, double spaced and the original with one carbon copy submitted. Retai another carbon copy for proofreading. Used manuscript are not returned. School and hospital appointments of th author should accompany the manuscript. It is desirabl that a synopsis-abstract of approximately 135 words ac company the manuscript.

References should be arranged at the end of the articl in the order in which the references are cited in the text The reference should give name of author, title of article name of periodical, volume number, initial page numbe and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings i India ink on white paper. They should not be mounte and name of author and figure number should be pencile lightly on the backs. Legends should appear on a separat sheet.

Legal difficulties may arise from unauthorized use o names, initials or photographs in which individuals can b identified. Permission should be secured from patient o legal guardian and signed duplicate or photostat submit ted with such photographs or identification. The Edito and Editorial Board assume no responsibility for th opinions and claims expressed in articles contributed b authors. If citation of an institution related to the article i made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which wil be sent to authors prior to publication.

All material other than scientific should be receive prior to the first of the month preceding month of publica tion.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

ontents for July, 1979

979 Annual Session

emarks of the President 365
emarks of the President-Elect 367
eport of the MSMA Auxiliary President . 372
irst Session, House of Delegates 374
econd Session, House of Delegates 379
hird Session, House of Delegates 380
eports of Committees and Commissions . 382
hanges in the MSMA Constitution 388
esolutions 388
lissouri State Medical Foundation Annual Meeting 393
esolution in Memory of Deceased Members 393
egistration 396
xhibitors 400

eatures

ISMA News Round-Up ..... Insert (354-355)
hoto-Comment by James W. Clawson, M.D. 356
ditor's Corner 357
etters to the Editor 358
lew Members 402
n Memoriam 404
ndex to Advertisers 406

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D., Columbia
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
F. Thomas Ott, M.D., St. Louis
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

ALDOMET®
(METHYLDOPA | MSD)
TABLETS: 500 mg, 250 mg, and 125 mg
MSD
MERCK SHARP & DOHME
Copyright © 1979 by Merck & Co., Inc.

Tenuate® ⓒⅣ
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary
INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.
CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).
WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence.* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.
PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.
ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria
DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.
OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633
Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request — Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs. Florence, Italy, Jan. 20-21, 1977.

Merrell

8-3921 (YSB7A)

Overweight may not always be simple... complications can develop.*

Complicated or not...

Tenuate® Dospan® ⒸIV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

In uncomplicated overweight.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

---

*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

Merrell

For prescribing information see opposite page.

new

600 mg tablets

Motrin®

ibuprofen, Upjohn

More convenient for some of your patients.

Now there are three Motrin tablet strengths to choose from-
600 mg, 400 mg, and 300 mg

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001, U.S.A.

© 1979 The Upjohn Company

J-6999-4

April 19

NDC 0108-5022-01
Tagamet HCl Injection
brand of
cimetidine
hydrochloride
SK&F LAB CO.
2 ml.=300 mg.
Tagamet
(cimetidine HCl
300 mg.
cimetidine/2ml.
Tagamet
brand of cimetidine
Tablets
100 tablets
NDC 0108-5013-20
SK&F LAB CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation
SKF
T13

Tagamet®
brand of
cimetidine

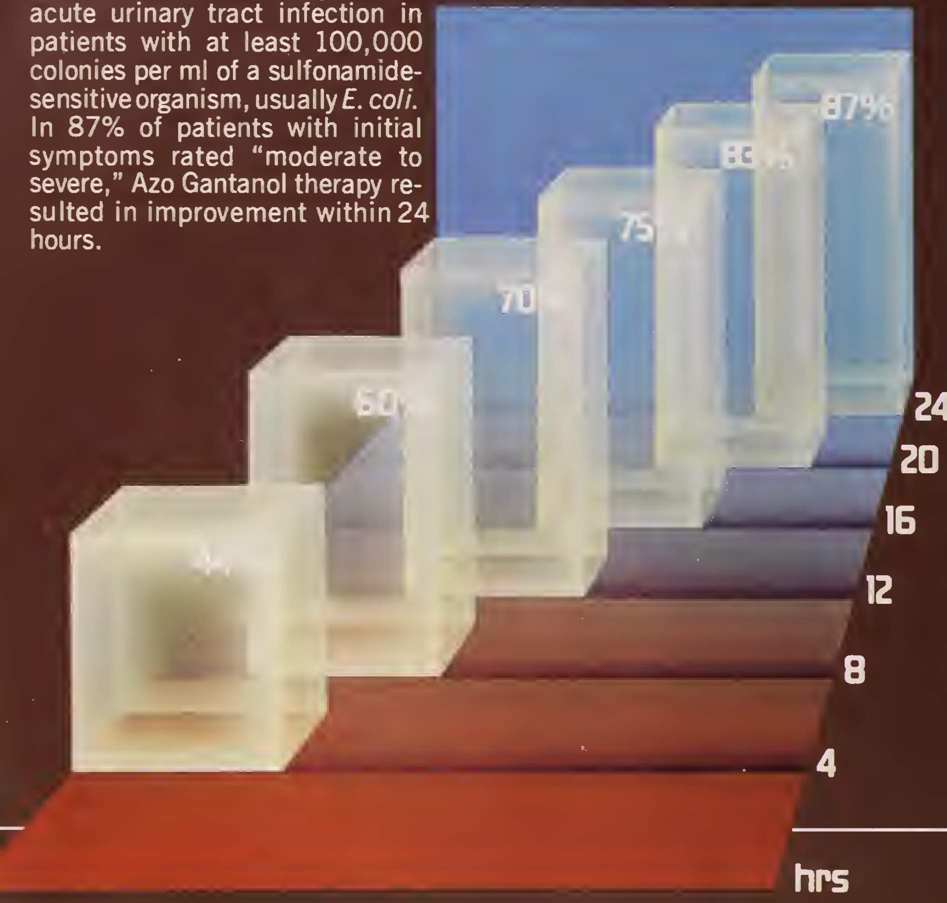
How Supplied:
Pale green 300 mg. tablets
in bottles of 100 and Single Unit Packages of 100
(intended for institutional use only).
Injection, 300 mg./2 ml.,
in single-dose vials
and in 8 ml. multiple-dose vials,
both in packages of 10.

SK&F LAB CO.
a SmithKline company

Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for
the pain

for
the pathogens

Before prescribing, please consult complete
uct information, a summary of which follows
Indications: In adults, urinary tract infection
complicated by pain (primarily pyelonephriti
pyelitis and cystitis) due to susceptible orga
(usually *E. coli, Klebsiella-Aerobacter, Staph*
coccus *aureus, Proteus mirabilis*, and, less f
quently, *Proteus vulgaris*) in the absence of
obstructive uropathy or foreign bodies. **Note:**
fully coordinate *in vitro* sulfonamide sensitivi
tests with bacteriologic and clinical response
aminobenzoic acid to follow-up culture medi
increasing frequency of resistant organisms l
the usefulness of antibacterials including sul
fonamides. Measure sulfonamide blood leve
variations may occur; 20 mg/100 ml should
maximum total level.
Contraindications: Children below age 12; su
fonamide hypersensitivity; pregnancy at term
during nursing period; because Azo Gantano
tains phenazopyridine hydrochloride it is con
dicated in glomerulonephritis, severe hepatit
uremia, and pyelonephritis of pregnancy with
disturbances.
Warnings: Safety during pregnancy not estab
Deaths from hypersensitivity reactions, agran
tosis, aplastic anemia and other blood dyscra
have been reported and early clinical signs (
throat, fever, pallor, purpura or jaundice) ma
dicate serious blood disorders. Frequent CBC
urinalysis with microscopic examination are r
ommended during sulfonamide therapy.
Precautions: Use cautiously in patients with i
paired renal or hepatic function, severe aller
bronchial asthma; in glucose-6-phosphate
dehydrogenase-deficient individuals in whom
dose-related hemolysis may occur. Maintain
adequate fluid intake to prevent crystalluria
stone formation.
Adverse Reactions: *Blood dyscrasias* (agran-
ulocytosis, aplastic anemia, thrombocytopeni
leukopenia, hemolytic anemia, purpura, hyp
thrombinemia and methemoglobinemia); *alle*
reactions (erythema multiforme, skin eruptio
Stevens-Johnson syndrome, epidermal necro
urticaria, serum sickness, pruritus, exfoliativ
dermatitis, anaphylactoid reactions, periorbi
edema, conjunctival and scleral injection, ph
sensitization, arthralgia and allergic myocard
G.I. reactions (nausea, emesis, abdominal pa
hepatitis, diarrhea, anorexia, pancreatitis an
stomatitis); *CNS reactions* (headache, periph
neuritis, mental depression, convulsions, ata
hallucinations, tinnitus, vertigo and insomnia
miscellaneous reactions (drug fever, chills, t
nephrosis with oliguria and anuria, periarterit
nodosa and L. E. phenomenon). Due to certa
chemical similarities with some goitrogens, d
uretics (acetazolamide, thiazides) and oral h
glycemic agents, sulfonamides have caused r
instances of goiter production, diuresis and h
glycemia. Cross-sensitivity with these agents
exist.
Dosage: Azo Gantanol is intended for the acu
painful phase of urinary tract infections. *Usu*
adult dosage: 2 Gm (4 tabs) initially, then 1
(2 tabs) B.I.D. for up to 3 days. If pain persi
causes other than infection should be sought
After relief of pain has been obtained, contin
treatment with Gantanol (sulfamethoxazole)
be considered.
NOTE: Patients should be told that the oran
dye (phenazopyridine HCl) will color the urine
Supplied: Tablets, red, film-coated, each con
ing 0.5 Gm sulfamethoxazole and 100 mg
phenazopyridine HCl—bottles of 100 and 50

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche
Nutley, New Jersey 07110

MSMA

MISSOURI STATE MEDICAL ASSOCIATION

NEWS
ROUND - UP

July 1979

Medicine fares well in Legislature

In a General Assembly that started at a gallop, slowed to a crawl and ended in a sprint, medicine fared well!!

Most important . . . nothing detrimental passed! At the same time, several good bills were adopted and some bills which could have had deleterious effects were amended for the better. All bills must be signed by Governor Joseph Teasdale by July 30 to become law.

Much of the credit for the successful session goes to the MSMA "Legislative Contacts" who took the time to relate to their lawmakers how medicine stood on the issues. This job will become tougher each session with the ever increasing "demand" for further governmental regulation.

Overall, 209 bills (out of 1,527 introduced) passed the Legislature. Of these, 15 will have a direct effect on medical or health care. Over 150 of the bills introduced affected medicine.

The bills which passed the Legislature are:

HB 445 — The "Good Samaritan" statute has been signed by the Governor and is now law in Missouri.

HB 88 — Providers of Medicaid services can receive a hearing on denied or reduced claims of more than $500.

HB 222 — Certificate-of-Need finally passed, but physician's offices are exempted from the provisions.

SB 293 — The "Family Practice Residency" bill, including osteopathic internships, passed. This provides state funds to establish residencies in outstate areas in hopes of increasing the number of family physicians in Missouri.

SB 328 — The omnibus "Nursing Home Act" provides more protection for patients. Sections which endangered physician-patient confidentiality were eliminated. The bill has been signed.

SB 423 — An oversight which deterred physicians from committing mentally ill patients to institutions was corrected. Physicians must have a minimum of background in recognizing the illness.

SB 241 — This bill differentiates between physician advertising and solicitation.

HB 182 — This allows funds for some hemophilia victims.

HB 934 — Bill eliminates "epileptic" and "mentally deficient" from state statutes regarding juvenile court jurisdiction.

SB 145 — Nursing home administrators will have to meet more stringent qualifications in order to run a home.

HB 216 — The limit of $40,000 salary for the Director of Mental Health was eliminated. This should enable hiring of a qualified Director.

HB 523 — The annual bill regulating abortions was passed in amended form. A report on the bill will be issued later.

Governor Joseph Teasdale signs into law the "Good Samaritan Act" as the bill's sponsors, Rep. Irene Treppler and Sen. George Murray (left) look on. Phillip M. Venable, M.D., who has worked for passage of the legislation for several years, was present at the signing.

SB 208 — This bill allows 17-year olds to donate blood.

HB 249 — Bill corrects the drug prescription statutes to allow the word "refills" to be printed on the form.

HB 9 — The Appropriations Bill mandates a 7% increase in fees for physicians under Medicaid.

Several bills opposed by MSMA failed to pass. These include two bills which would have allowed Medicaid to pay registered nurses directly for their services; a bill to legalize Laetrile; the annual attempt to expand the practice of chiropractic; several bills which would have interfered with confidentiality; and bills which would have licensed radiologic technicians, social workers, physician's assistants, mental health technicians, occupational therapists and their assistants and athletic trainers.

Other bills which the MSMA either supported or watched which failed included a "Definition of Death"; a separate Department of Health; a stronger Medicaid medical advisory committee; a bill allowing corneal transplants by coroner's physicians and medical examiners; a bill to license HMO's which started off good, but picked up bad amendments; a bill to add a lay member to the Board of Healing Arts; a bill establishing a funding system for the "911" emergency telephone number; and a bill to reduce malpractice awards by the amount the plaintiff received from other sources.

Council considers resolutions, makes appointments

During the June 2 meeting in Columbia, the MSMA Council took action on resolutions referred to it by the 1979 House of Delegates. Members of the Council voted to refer Resolution 7, regarding expert medical witnesses, to the Commission on Medical-Legal Affairs for study and wording for a MSMA Bylaws change.

The Council also acted upon the following resolutions:

10) Paramedical Personnel Accreditation — referred to the Commission on Continuing Education and Health Manpower for study and report back to the Council.

15) Uniform Disposition of Alcohol Related Traffic Offenders — directed staff to research and report back at the Interim Session.

18) Medical Hall of Fame — appointed a committee of Drs. James Stokes, Richard Hedges and Richard Fallon to study this resolution.

21) Review of Awards for Punitive Damages — Legal research is being conducted in this area.

Also at the meeting, appointments of the following Councilor advisors to Commissions were made:

Continuing Medical Education — Marvin A. Singleton, M.D.

Public Affairs — Ronald A. Youmans, M.D.

Interspecialty Medicine — T. J. Cooper, M.D.

Medical Economics — J. Otto Lottes, M.D.

Medical-Legal — I. H. Clark, M.D.

In his President's Report, Dr. Andrew McCanse made several appointments: Dr. Walter German to the Committee on Legislative Affairs and as chairman of the Action Committee on Political Affairs; Dr. Howard McAlhany as chairman of the Action Committee on Socioeconomics; and Dr. Richard Bradley as chairman of the Action Committee on Medical Affairs.

In other actions, the Council:

- Approved CME accreditation for Boone County Medical Society, one year provisional; Kansas City Surgical Society, two years full accreditation and St. Louis Society for Medical and Scientific Education, three years full accreditation.
- Instructed AMA delegates to reaffirm MSMA's stand on LCCME taken at the Interim Session in 1978.
- Recommended that the Committee on the Impaired Physician furnish the Council with their definition of an impaired physician.
- Voted not to participate in an ambulatory care survey being conducted by the Department of HEW.
- Appointed Dr. F. Thomas Ott of St. Louis to the Editorial Board of MISSOURI MEDICINE.
- Recommended assessment of the MSMA membership for the Missouri State Medical Foundation for another three-year period.
- Instructed the Commission on Continuing Education and Health Manpower to schedule a "running event" at the 1980 Annual Session in Kansas City and named Dr. Ralph Hall as chairman of this event.
- Voted to proceed on three medical public service announcements for Missouri television stations.
- Appointed an ad hoc committee consisting of Drs. Ronald A. Youmans, A. J. Campbell and Louis P. Hetlage to consider the responsibilities of the Commission on Public Affairs.
- Approved incorporation of a MSMA Credit Union by the Ad Hoc Credit Union Committee.
- Recommended that MOMEDICO not publish ads in the lay press.
- Went on record as being in favor of house calls, but that Resolution 24, introduced during the 1978 Interim Session, is unnecessary.
- Voted to send a letter of thanks to Mr. Tim Danis for his efforts on behalf of MOMEDICO and Missouri physicians.

Auxiliary member to discuss medical marriages with Phil Donahue

Mrs. William M. Walker (Pat) of Springfield has been selected to appear on the Phil Donahue show for a program devoted to the doctor's wife and medical marriages. Recently, much has been written in the media about this subject.

Mrs. Walker, a past president of the MSMA Auxiliary, was chosen by the producer of the show from a group of names submitted by the AMA Auxiliary. The audience for this program will be composed entirely of Auxiliary members from Illinois, Indiana, Iowa, Michigan and Wisconsin.

A San Diego psychiatrist, Philip A. Baratta, Jr., M.D., will be the main guest. The program will be aired at the following times and dates in Missouri: KTVI Ch. 2 — St. Louis — July 19 — 9 a.m.; KYTV Ch. 3 — Springfield — July 26 — 11:30 a.m.; KCMO Ch. 5 — Kansas City — July 26 — 9 a.m.; KCBJ Ch. 17 — Columbia — August 2 — 4:30 p.m.; KOAM Ch. 7 — Joplin — August 9 — 9 a.m.

Changes in MSMA insurance plans

Members of the MSMA who have coverage under the MSMA Term Life Plan and the Major Medical Plan Policy will receive a mailing in July regarding changes in those policies.

The MSMA's Executive Council approved the transfer of the Term Life Insurance Plan to the Mutual Life Insurance Company of New York (MONY), effective September 1, 1979. This change will provide members with increased benefits and a better rate structure.

The Executive Council also decided to eliminate duplication of insurance plans and administrators. The MSMA Major Hospital-Nurse Plan, underwritten by the Commercial Insurance Company, will terminate on September 30, 1979. Effective October 1, coverage will transfer to the MSMA Major Medical Plan, underwritten by MONY. The Insurance Administrator will change from the Fred S. James Company to Forrest T. Jones and Company, Inc.

MSMA membership records gain

Membership in the Missouri State Medical Association recorded a gain in 1978, although not as substantial as the increase in 1977.

There were 5,229 members in the MSMA as of December 31, 1978, an increase of 142 over the 1977 total of 5,087. In 1977, the net gain was 171.

As of June 1, 1979, the membership of the MSMA is approximately 5,290.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

well G. Bennett
eltone Hearing Aid Service
18 W. Walnut Street
pringfield, Missouri 65806
17) 866-0551

n Gidley
eltone Kansas City Hearing Aid Service
01A Grand Avenue
ansas City, Missouri 64106
16) 471-1943 (816) 471-4105

eltone Hearing Aid Service
22 Kirkpatrick Building
. Joseph, Missouri 64501
16) 279-6501

on Hicks
eltone Hearing Aid Service
orth Park Mall
1 Range Line Room 248
plin, Missouri 64801
17) 624-0931

ean Jones
eltone Hearing Aid Service
. Box 682 400 E. High
fferson City, Missouri 65101
14) 635-3557

eltone Hearing Aid Service
North 10th
olumbia, Missouri 65201
14) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Service
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Service
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Service
State Fair Shopping Center
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

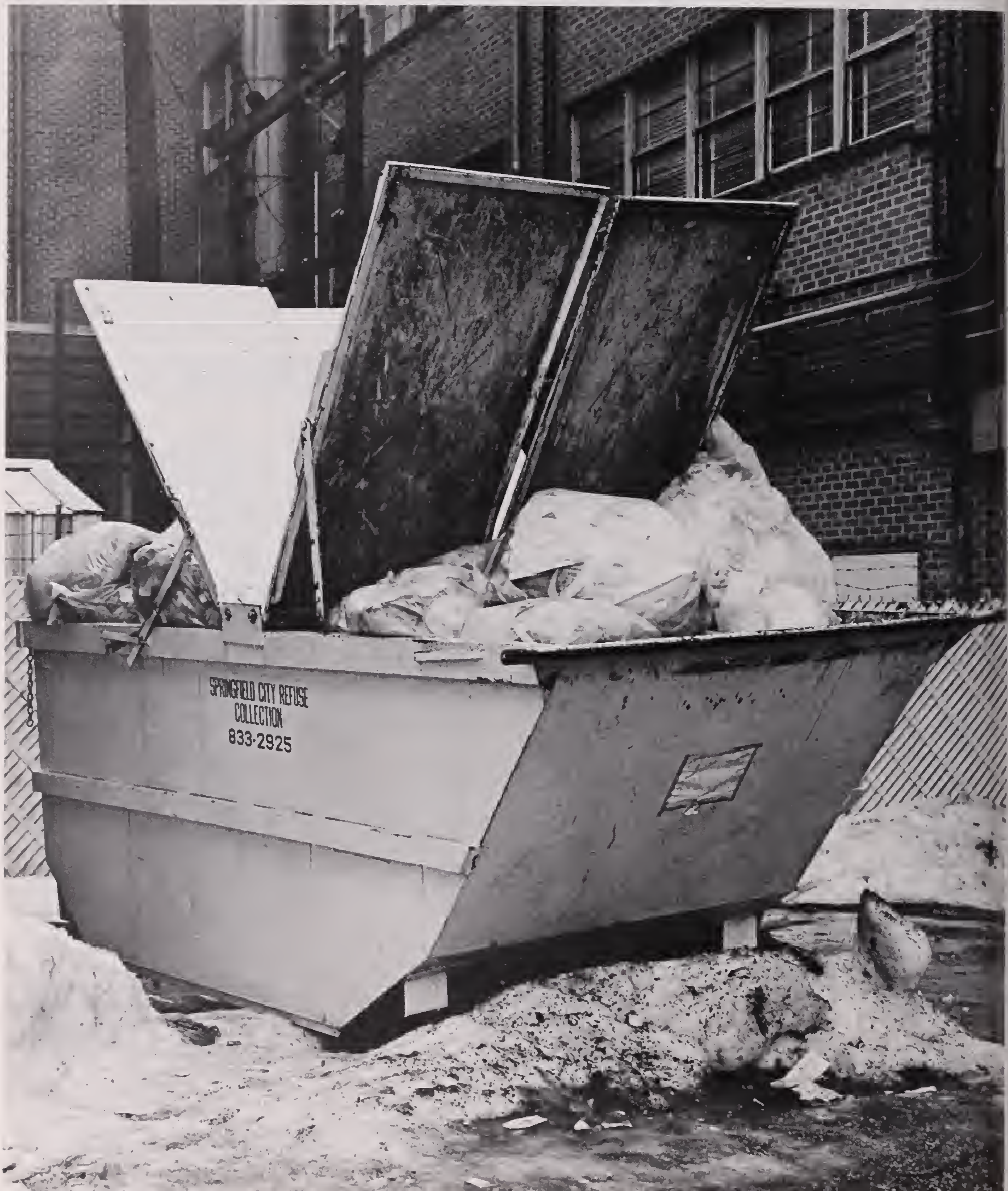
Beltone Hearing Aid Service
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Service
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

Beltone Hearing Aid Service
320 Spring
Sweet Springs, Missouri 65351
(816) 335-6727

Beltone
WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

Photo-Comment by James W. Clawson, M.D., Springfield


SPRINGFIELD CITY REFUSE
COLLECTION
833-2925

. . . and so goes the news?

Editor's Corner

THE STATE OF THE NATION

On the 7 AM CBS radio news on Jan. 10, 1979, the *first three items*, which were dwelt on at length, concerned:

(1) The wife in Oregon who sued her husband for rape and divorce and then decided he wasn't so bad, after the husband was acquitted — and after a great deal of national publicity. Following the acquittal, the blissful couple, hand in hand, came to her attorney to call off the divorce suit. Now, it is back on again. Jimmy the Greek is probably rating it even as to who pays whom; plaintiff, defendant or attorney.

(2) Actor Lee Marvin was sued in Los Angeles by his amiable "companion" of six years. The lady had her name changed to Marvin because Lee had never seen fit to change it by decree. Wanted, a trifling sum from a trifling lover; $1,000,000 for her tender care of "Lee, baby."

(3) A policeman in Washington, D. C. underwent a sex-change operation and was suing the department to force them to re-hire him (her) as a policewoman.

Please remember that these were the three *headline* CBS news items.

After this trash, I found myself wondering about the sorry Sodom and Gomorrah state into which our society has sunk. Anything goes! There is money enough to fund it, a legal profession to dignify it and never an outcry from a citizenry which should be outraged at such news reporting, if our citizenry is still capable of being morally outraged.

But, even more, I sadly dwelt on the degeneracy of a great news bureau which would choose these three topics as its morning headlines when:

(1) The recognized government of Cambodia had just fallen, mass atrocities were committed and the fate of that nation's military and political leaders was uncertain.

(2) Iran was in an uproar with hourly announcements about its attempts to formulate a government acceptable to its political factions (and this was economically important to the United States).

(3) The midwestern United States was pinned down by record low temperatures, snow and ice, and with more expected.

Of course, the easy-out of CBS is that it is giving the public what it wants to hear. Taking into account the American insatiable desire for filthy paperbacks and sex movies, I suppose that attitude has some justification. But, does the responsibility of CBS reach no further than the easy-out?

I see it differently! Somewhere in all this mess had better emerge a still, small voice crying for some return to decency and moral value. And people had better heed the cry if this country is to endure, because decency and moral value is the glue which holds any society together over the long haul. It you don't believe it, quote me an exception. But I'll tell you beforehand that I am a fair historian.

And if, as a society, we do not have some return to the simple verities which govern the relationships between individuals, we can only blame ourselves because history is strewn with the wreckage of nations which crashed on the rocks of profligacy. Greece and Rome are well-known examples. And, if you recall, Greece and Rome also had leaner and hungrier societies looking over their shoulders; perhaps no less corrupt, but still strong and ruthlessly practical.

Only a little while ago, Nikita Khruschev said, "Why should we confront you from without when we can better wait for you to collapse from within?"

Think it over! At that time, I thought Khruschev was a boor with a peasant mind. I still think he was a boor, but perhaps the mind of a practical peasant might just see through this facade of ours.

And I have a deep conviction that a great news bureau, which has mercifully been left unrestrained in this country, had best do a little soul-searching of its own.

Wilfred E. Wooldridge, M.D.

LETTERS to the Editor

Asks Physicians To Band Together

To the Editor:

At the Missouri State Medical Association Annual Session in St. Louis, much time and energy were spent on the question of better reapportionment representation of delegates. It was the opinion of the St. Louis delegation that since our membership represents 45% of the dues paying members of the MSMA, we should have a comparable representation within the House of Delegates. It was apparent that we are at odds, pitting doctor against doctor and component society against component society, Kansas City-outstate against St. Louis, and creating deep disharmony among the members of the MSMA. The MSMA should function for the best interest of all its members. We have nothing to gain and much to lose by fighting among ourselves.

I hope that most physicians in Missouri are aware that our profession, as never before, is under profound scrutiny, even suspicion. Now is the time when all physicians should band together and not permit ourselves to be splintered apart by dissenting groups. I realize that many tireless personalities are involved, but hopefully can be eliminated for the well-being of our state organization. Intraorganization membership organization disputes like these are best discussed in small committees or in the MSMA Council. Hopefully, the Council will do what is best for our membership. Each meeting will not become a tug of war.

I have recommended to the St. Louis Metropolitan Medical Society membership and the Council that we should all work together. I hope all members will join me in putting this energy-draining problem behind us so we can get on with making MSMA more efficient for Missouri physicians and our patients.

George M. Bohigian, M.D.
President
St. Louis Metropolitan Medical Society

'The Art of Healing' Should Be Required Reading

Dear Dr. Wooldridge:

You should be commended by the entire reading public of Missouri Medicine for printing Dr. Tumulty's article on "The Art of Healing" (May issue). Perhaps I am impressed because it expresses the philosophy I was taught and I hope I practiced while in private practice.

I have been impressed repeatedly in the past year that physicians are training themselves to be glorified technicians. As a resident on pathology at Tulane, we are required to sit in on the morning medical report. I note frequently the agonizing that Thorpe Ray does when a resident reports on a full blown diabetic ketoacidosis and waits until he has a whole sheaf of laboratory reports before he gives the first unit of insulin.

As one who has practiced more years than most of these fellows have lived, I repeatedly recall something that Pappy Neal from M.U. and other teachers at N.Y.U used to proclaim — the laboratory generally should confirm what one has already thought of, not confirm by history and physical examination what the sheaf of laboratory reports may suggest.

I think this article should be required reading for every junior and senior medical student and be repeated during the years of training.

Sincerely,
Carl D. Siegel, M.D.
Metairie, La.

WILL YOU LET
YOUR UNPLANNED ESTATE
BECOME JUST
DEAD WAIT?

Call on . . . *CommuniCare* T.M. REG

Marketing and Management Services

WM. K. HALLIBURTON
GLENN W. KELLEY
Managing Associates

11147 OLIVE STREET
ST. LOUIS, MO. 63141
(314) 432-3008

V-Cillin K®
penicillin V potassium
is the most widely prescribed brand of oral penicillin
Lilly
V-CILLIN K
C 29
Tablets
125, 250, and 500 mg*
Oral Solution
125 and 250 mg*/5 ml

V-Cillin K®
penicillin V potassium

Description: V-Cillin K is the potassium salt of penicillin V. This chemically improved form combines acid stability with immediate solubility and rapid absorption.

Indications: For the treatment of mild to moderately severe pneumococcal respiratory tract infections and mild staphylococcal skin and soft-tissue infections that are sensitive to penicillin G. See the package literature for other indications.

Contraindication: Previous hypersensitivity to penicillin.

Warnings: Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

Precautions: Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin. [102175]

***Equivalent to penicillin V.**

Additional information available to the profession on request.

Lilly

Eli Lilly and Company
Indianapolis, Indiana 46206

900416

The Speaker's Table, 121st House of Delegates

Annual Session 1979

Distinguished guest speakers and the MSMA and Auxiliary officers always add an important dimension to every Annual Session. (Right) *Dr. Martin and Mrs. Campbell are shown as they addressed the first session of the House of Delegates on April 19. Dr. Gardner and Representative Volkmer were the featured speakers at the MSMA General Session on April 20. Dr. Wilkins addressed the MSMA and Auxiliary members and their guests at the Auxiliary's annual Public Affairs Breakfast on April 21.*

MSMA President-Elect Andrew McCanse, Kansas City *(left)* and Edwin K. Burford, Jr., M.D., Cape Girardeau, Speaker of the House.

John N. Martin, M.D.
St. Joseph
President, MSMA

The Honorable Harold L. Volkmer
Hannibal
Representative, Missouri 9th Congressional District

Hoyt D. Gardner, M.D.
Louisville, Ky.
President-Elect, AMA

Mrs. A. J. Campbell
Sedalia
President, MSMA Auxiliary

(Left)
George T. Wilkins, M.D.
Granite City, Ill.
Board Member, AMPAC

More than 100 members and medical student-guests enjoyed the MSMA's first jogging event in Forest Park.

Newly elected MSMA officers and ouncilors are *(seated, left to right)* Drs. Theodore Paletta, Third District Councilor; J. Otto Lottes, Third Disrict Councilor; John H. Walterscheid, Second District Councilor; Carol F. Williams, Treasurer; *(standing)* Richard H. Fallon, Third District Councilor; Gerard Callaghan, Third District Vice-Councilor; James Stokes, Third District Councilor; and Thomas J. Cooper, Third District Councilor.

Other officers and councilors selected during the Annual Session are *(left to right)* Drs. Donald McIntosh, Seventh District Councilor; Milton B. Ozar, Vice-President; John Torontow, Sixth District Councilor; and Walter A. German, Eighth District Councilor.

Dr. Louis P. Hetlage, Troy, new MSMA Council Vice-Chairman *(left)*, and Dr. Eugene T. Hansbrough, Poplar Bluff, Council Chairman.

Dr. Richard V. Bradley, MSMA President-Elect for 1979-1980 *(left)*, and Dr. McCanse consult during the annual session.

Annual Banquet

in honor of MSMA Past-Presidents

The annual banquet on Saturday of the annual sessi
is always a stellar event that provides that special
opportunity for members and guests to relax, enjoy
fine dinner, visit with old and new friends and danc
to the music of a "big band."

Outgoing President John N. Martin *(left)* presents the gavel to 1979-1980 President Andrew McCanse. Dr. McCanse then presented to Dr. Martin a presidential plaque of appreciation for his outstanding service to the MSMA.

AMA Delegate Rae W. Froelich and Mrs. Froelich of Lebanon visit with Mrs. Hoyt A. Gardner and Dr. Gardner, President-Elect of the AMA.

Dr. Guy N. Magness of St. Louis, MSMA president in 1953-1954 *(center)*, is greeted by Mrs. Rudy Ruhling, MSMA Auxiliary President, and Dr. Ruhling.

Dr. E. A. Stricker of St. James, dent in 1973-1974, with Mrs. Richa Hedges and Dr. Hedges, First D Councilor, and Mrs. Richard P. B and Dr. Bowles, Alternate Delegate AMA.

Dr. and Mrs. George Bohigian of St. Louis with President McCanse and his daughter, India. Dr. Bohigian is president of the St. Louis Metropolitan Medical Society.

Mrs. John P. Walterscheid of Hannibal *(left)* with Mrs. A. J. Campbell and Dr. Campbell, who was elected Vice-Councilor of the Sixth District.

Although surprised by the photo pher, Dr. and Mrs. Walter T. Gunn Louis, enjoy dancing to the music o excellent orchestra. Dr. Gunn was p dent in 1972-1973.

The MSMA Auxiliary

T annual convention of the MSMA Auxiliary is held c currently with the MSMA Annual Session. A new event was introduced this year with the jointly s nsored Benefit Auction. The generous response of MA and Auxiliary members and guests resulted in r eeds of $8,000 for the AMA/ERF and the Missouri State Medical Foundation for Missouri medical students.

Mrs. A. J. Campbell, retiring president, presents the official Auxiliary President's Pin to Mrs. Rudy Ruhling, St. Louis, at the installation luncheon.

Dr. Donald A. Fakhoury and Mrs. Fakhoury, newly in-talled President-Elect *(left)* with Mrs. Rudy Ruhling and Dr. uhling at the reception in honor of Mrs. Ruhling as incoming resident.

Chase·Park Plaza

President Janet Campbell assists "Auctioneer" Jay Randolph, nationally known TV/Radio sportscaster, at the successful Benefit Auction. MSMA members F. T. H'Doubler, Harold Lurie and James Brown of the "Singing Doctors of Springfield" also served as auctioneers.

Members of the MSMA Auxiliary elected and installed new officers for the coming year. They include *(left to right)* Mrs. Vernon Jackson, Fulton, First Vice-President; Mrs. Jerry Meyer, Concordia, Third Vice-President; Mrs. William H. Goodson, Jr., Kansas City, Fourth Vice-President; Mrs. William Penninger, Springfield, Auditor; Mrs. John Erickson, Sedalia, Treasurer; Mrs. James N. Haddock, St. Louis, Recording Secretary; Mrs. Rudy Ruhling, President; and Mrs. Donald H. Fakhoury, President-Elect. Not pictured are Mrs. Larry Ozenberger, Plattsburg, Second Vice-President; Mrs. E. E. King III, Normandy, Corresponding Secretary; and Mrs. William R. McPhee, Kansas City, Parliamentarian.

Charles H. Appleberry, M.D., Flat River

Burchard S. Pruett, M.D., St. Louis

Mary E. Morris, M.D. St. Louis

Robert E. Votaw, M.D. St. Louis

Harry G. Moore, M.D. St. Louis

Doyle C. McCra M.D., Bolivar

MSMA Members Receive 50-Year Pins

Members of the Missouri State Medical Association who have completed 50 years in the practice of medicine are honored at the Presidents' Banquet each year.

Nineteen members who attained this distinguished accomplishment in 1979 are pictured here at the time they received their 50-Year Pins and congratulations from President John N. Martin on behalf of the MSMA.

Members who received 50-Year Pins but did not attend the Banquet are Drs. John J. Ryan, Clayton; Bernard H. Flotte, Florissant; Jack B. Brams, Robert C. McClanahan, Sidney F. Pakula, Ernest K. Robinson and Everett A. Wilkinson, Kansas City; Edwin C. Rinck, Nevada; Milford T. Kubin, Pacific Grove, Calif.; Richard L. Sutton, Jr., Shawnee Mission, Kan.; C. H. Max Fitch and Ernest B. Hanan, Springfield; and Guerdan Hardy, J. M. MacNish, Charles O. Metz, Oliver E. Tjoflat and Emmett D. Wall, St. Louis.

Owen W. D. Craig, M.D., St. Joseph, receives his year pin from President Martin *(left)*.

Irwin B. Horwitz, M.D., St. Louis

Pierce W. Powers, M.D., St. Louis

Robert C. Treiman, M.D., St. Louis

Royal A. Weir, M.D. Ballwin

William A. Marmor, M.D., St. Louis

William J. Wotawa M.D., St. Louis

Oscar A. Carron, M.D. Perryville

Oscar H. Damron, M.D., Warrensburg

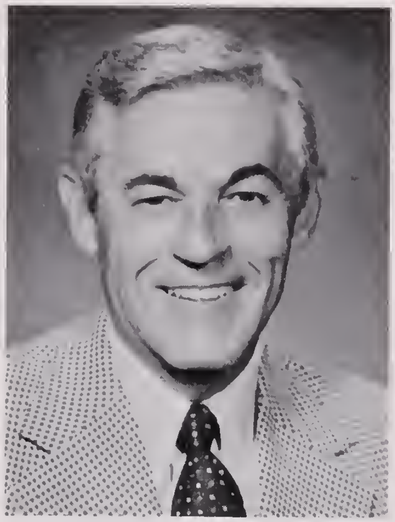
Wilfred W. Hurst, M.D., Joplin

Shelby B. Hughes, M.D., Clinton

Louis F. Howe, M.D St. Louis

J. A. Graneto, M. St. Louis

Remarks of John N. Martin, M.D., President



Mr. Speaker, Dr. Gardner, Dr. McCanse, Delegates and Guests:

I first want to congratulate the members of the MSMA. You have made it through another year in spite of Jimmy, Joe and me.

I had never thought of myself as a leader. And now after this past year, you know my thoughts, for once, were right.

For just a few minutes, let me remind you of some of the things your Association is trying to do to be of service to medicine and to you.

MOMEDICO is your stock professional liability insurance company. It is a financialy sound, licensed insurance company. Its Board of Directors are members of the MSMA. Your MSMA owns all the stock. It has as its reinsuror the Kemper Insurance Company. After what our friendly Supreme Court of Missouri did to our profession in regard to punitive damages, I would suggest you take a good, hard look at the benefits MOMEDICO might offer you.

In the field of continuing medical education, your Association was at one time the body which accredited hospitals and medical societies. That is, until the AMA passed a resolution which resulted in LCCME having the authority of accreditation. So, Missouri and all the other state associations relinquished their authority of accreditation. That move by the AMA is a lot like the fellow who cut off his nose to spite his face.

As one looks at all the CME programs being thrown at us, one has to wonder whether most of them are big "rip-offs." As George Bernard Shaw said, "Learning learns but one lesson — doubt."

I mention CME merely to remind you to think and consider before you are engulfed by the term "mandatory CME."

The new Committee on Impaired Physicians is in operation. My many thanks to Dr. Don McIntosh, its chairman, and all the committee members for the organizing and implementation of a program that has as its purposes (1) to protect the public from substandard care, and (2) to show concern and compassion for our fellow physicians. It's always better to help than ignore.

I hope you will support the purposes of this program. And I suggest you heed what Pamela Brown once said, "Most of us live our lives like the way we watch television. Even though the program isn't as good as we would like to be, we are too lazy to get up and change it."

We have recently started meeting with other related health care associations and agencies. I hope this will continue because it is through these meetings that we can develop and better understand the problems that concern all of us. It is time we realize that health care is not just "doctoring."

Health care does involve a lot of people other than just ourselves. I feel it's time to communicate with all other groups, such as dentists, optometrists, nurses, podiatrists, pharmacists and others, because it's only through dialogue with each other that we can ever hope to solve our many problems.

Let me assure you that at our last meeting with this group we did not agree . . . did not agree to follow "Hendrickson's Law" which says, "If a problem causes many meetings, the meetings eventually become more important than the problem."

I recently read that it's reported that our Secretary of HEW, what's-his-name, has the cure-all for health care, and it's this, "When in danger or in doubt, run in circles, scream and shout."

As Bill Vaughan said, "Everything is much simpler today — instead of solving a problem, you just subsidize it."

The Missouri Medical Political Action Committee is still trying to do a job on the political front for you and our profession.

We ask and we beg for your support. We need your dollars, but we also need you. We need your help to personally contact your elected representatives. The old "eyeball to eyeball" is still the best type of politics. We need every physician to do the eyeballing.

Now, I really don't know why I got on this eyeballing, unless it's just the word "ball" that fascinates me. Anyway, it is at the state level that we must do our eyeballing. Whatever happens in Washington will filter down to Jefferson City and that is where we must be.

Sam Gompers said, "What the government gives you, the government can take away and once it starts taking away, it can take more than it gave."

Ladies and gentlemen, we need you as sustaining members because we need your dollars, but we need more. We need you all to be contacts with legislators. Tell them medicine's side. At least, it will be the truth. As George Channing said, "I can prove anything by statistics — except the truth."

I guess that explains why our government survives on statistics.

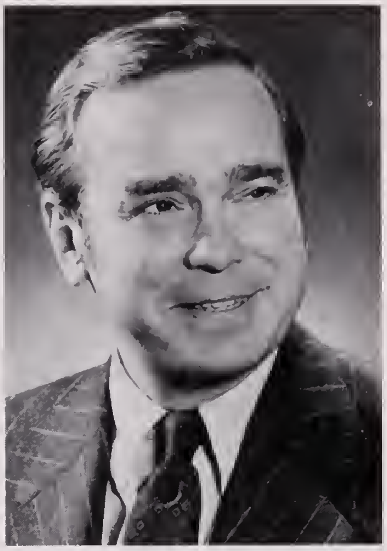
I would love to talk to you about bureaucrats, but time now is more important than they are. One thing I think you should know. There are two types of bureaucrats who never amount to much — those who cannot do what they are told and those who can do nothing else.

Bureaucrats believe in one axiom — a welfare state is one that assumes responsibility for the health, happiness and general well-being of all its citizens, except the taxpayers.

As this year ends, I say now as I did a year ago that the MSMA is a great organization because of its members. But now I see another reason for its greatness and that is its staff in Jefferson City. It is a group of dedicated people working for the betterment of medicine and the recognition of the MSMA. My thanks go to them for leading me through a truly wonderful year.

To the Council, commission members, all committee members and all of you, my thanks for a year I will always remember.

"I don't know what a moron is and I don't give a damn, I'm thankful that I am not one. My God, perhaps I am."



Remarks of Andrew McCanse, M.D., President-Elect

Mr. Speaker, Dr. Gardner, Dr. Martin, Delegates and Guests:

During the five years that I have served on the Council of this Association, I have become increasingly proud of our many accomplishments. I will begin with a brief summary of some of our activities in the past year. I have great admiration for the many physicians who have devoted so much time and energy to making our system work through their participation on committees and commissions.

I'm going to acknowledge a few of those individuals, but there are many, many more physicians who also deserve acknowledgement.

On many occasions, I have heard my good friend, Pres. John Martin, say how important MMPAC is to us and to our activities. I agree wholeheartedly with John and urge your support of this group which contributes to the campaigns of candidates in both political parties who might be expected to listen to our views on medical affairs.

Dr. Jack Matthews and his Committee on Legislative Affairs have dealt with many important issues in the past year, such as the certificate of need legislation, including doctors' offices for which one health systems agency in Missouri paid a lobbyist $25,000 to help get passed.

Recently, the Missouri Senate passed the committee substitute for Senate Bill 125 which would allow direct payment to nurses who treat Medicaid patients. Under the Independent Nursing Practice Act in Missouri, nurses are increasing the scope of their activities to include services traditionally performed by physicians.

The planning committee, under the chairmanship of Dr. Paul Rother, has wrestled with the problems of reappointment of the Council and of the House of Delegates as well as with election of AMA Delegates. We seem to spend an inordinate amount of time on these internal political chores.

Our publications committee with Dr. Wilfred Wooldridge as chairman continues to publish MISSOURI MEDICINE which has printed 39 scientific articles and 11 special articles in the past year.

Dr. Bill Allen and the Voluntary Health Agencies Committee have worked with these groups to help each other on legislation, inform physicians as to services available and, also, emphasize prevention of many different conditions.

The action committees, begun under the leadership of Dr. Howard McAlhany, have begun to function. Dr. Richard Bradley is chairman of the Medical Affairs Action Committee which has concerned itself with representation on HSA and also, on the voluntary effort to reduce hospital costs. Dr. Walter German, chairman of the Political Affairs Action Committee, has increased the number of legislative contacts so that all of our senators in Missouri and two thirds of our representatives in Missouri have a physician who will contact them on various matters.

Dr. Eugene Hansbrough, chairman of the Socio-Economic Action Committee, has addressed the matter of educating us for negotiations with third parties and others.

The Commission on Continuing Education and Health Manpower, under Dr. George Ladyman, has planned our scientific sessions for these meetings and secured continuing medical education approval for many different institutions around the state.

Dr. Thomas Cooper and the Interspecialty Medicine Commission have dealt with the matter of obsolete procedures. Dr. Max Heeb, chairman of the Medical Economics, Third Party Medicine and Governmental Relations Commission, has wrestled with the Medicaid Program, its inadequate funding and disorganization. That Commission also has spent time dealing with second opinion programs, IPAs and HMOs. The Commission on Medical-Legal Affairs, under Dr. Charles Ash, worked with the Professional Liability Review Boards until they were declared unconstitutional last February.

Last October, Dr. Byron Watts and his Commission on Public Affairs staged a public relations workshop at which Dr. Edward R. Annis gave his usual outstanding presentation. That Commission also considered the public opinion survey commissioned by the MSMA, which shows Missourians to be well pleased with their medical care but quite concerned about medical care costs, a reflection of the feelings of the country at large.

The Missouri State Medical Foundation, headed by Dr. Al Cross, loaned $74,450 to medical students in 1978 and now has a record of having loaned more than $1,000,000 to young people studying medicine.

Of course, our own Dr. Hugh Ritter is president of the AMA/ERF and directs many of the activities of that important group. Hugh is up for reelection to the AMA Board of Trustees this summer and your AMA delegation is eager to receive any assistance you can give in his behalf.

I would like to turn to three areas which I believe are of primary importance to us as a state organization. These are; (1) cost containment; (2) health planning; and (3) health policy. I will consider cost containment first.

American medicine is often accused of being a non-system with the implied understanding that the reorganization of the way that our patients receive their medical care is likely to be more cost efficient than the way that medical care is presently being received. That understanding would go on to say that the reason that medical care costs so much is that there are a great number of inappropriately spent dollars in physicians' offices, hospitals and other places where such care is rendered. If we change the system to get rid of these inappropriate expenditures, then our dollars will be spent more effectively for treatment.

The term "non-system," as applied to American medicine, gives credence to a very serious misconception about what actually is a highly developed and sophisticated system of care, and that is our medical care system in a social system. The system works exceptionally well, primarily due to the strong interpersonal relationships among physicians that encourages them to obtain for their patients the best possible medical care.

Most disease processes are self-limited and can be quite adequately cared for by the patient's primary doctor. When the health problem becomes more complicated, however, the patient will be routinely referred by the primary physician to a physician specializing in that patient's problem. After that physician is finished with his or her management of the patient, the patient will be returned to the primary physician.

That system is one that has stood the test of time and works to the satisfaction of an overwhelming majority of American people, according to recent polls.

This majority is very satisfied with the care they received, but they are worried about the costs.

Nevertheless, no system is perfect and the problems that are seen with the present system need to be addressed and solved. Physicians are aware of the rising costs of medical care and are in the process of helping to work out some needed changes.

According to the most recent issue of the *Profiles of Medical Practice*, physicians' fees have risen 7.4% annually during the time period of 1966 to 1977. That is an increase over the all-items component of the Consumer Price Index which rose at a rate of 5.6%, the all-services index which rose at a 6.4% annual rate and, also, in total medical care items which rose at a 7% annual rate.

During that same time period, the price of a semi-private hospital room rose at a rate of 12.2% and operating room charges 11.7%. In the 12 months ending February, 1979, overall consumer prices were up by 9.9% while physicians' services increased only 8.8%.

I do not wish to befuddle you with statistical information, but I do wish to say that physicians' fees have risen at a somewhat higher rate than other items in the Consumer Price Index. Not all of this rise can be justified on the basis of the cost of malpractice insurance although this is a significant contributing factor.

The total cost of coronary artery surgery today is something over $10,000 per case. I asked one hospital in Kansas City about its cost for hospitalization of these patients about one year ago and was told the average would be $6,000 to $6,500. This leaves about $3,500 to $4,000 to physicians' ees for the procedure which includes the surgeon, assistant surgeon, anesthesiologist and cardiologist. In the largest hospital in Kansas City doing such cases, that would amount to $10,000,000 worth of annual medical care costs for hese patients. These patients make up about 7% of the surgical schedule in that hospital.

There is a common concern among practicing physicians that they do not wish to be in the position of rationing medical care. The decision as o whether to order an expensive laboratory test or X-ray procedure for a given patient should be made on the basis of its potential benefit to the patient and not on whether the test costs more han its likelihood of beneficial effect. There are guidelines for helping physicians judge when a given test may or may not be appropriate in many nstances and they are being formulated in other nstances. These guidelines have the important characteristic of being devised by physicians and hey result in needed education for all physicians.

There seems to be a feeling in some quarters hat physicians receive some sort of tangible reward from ordering X-ray and laboratory tests. Such a practice, of course, would not only be unethical but illegal.

With the federal government and other third-party carriers establishing guidelines for standards of medical care, it becomes increasingly mportant for us to evaluate these guidelines objectively and to allow emotions to cool before hrowing all the unwanted recommendations into the wastebasket.

Most of us are members of hospital medical staffs. In that capacity, we should review our requirements for laboratory, X-ray and other routine tests on admission in light of what we have found from our experience with these tests as truly being necessary. Just because the federal government or the Blues recommend deletion of routine laboratory tests in certain cases does not mean their thinking is all bad. This is not to say that any third-party carrier should have a role in making medical decisions which none of us believe they should. But a review of present practices based on reason may help us allay the public fear of increasing costs of medical care.

It seems that doctors are often cast in the role of adversaries to the health budget planners and are villains who cause most of the problems. President Carter last year affirmed the position against both doctors and lawyers who were said to be all right as individuals, but he implied that they should not be allowed to function as associations. There appears to be a working methodology among the federal bureaucracy which attempts to discredit physicians as a group and many times individually as a means of lessening the oppostion to inadequately conceived and poorly administered medical care policies of the federal government.

The federal government does have a place in medical care, and I believe most physicians feel that it does. However, that position should be in helping to provide care for those who are in financial need and, even more important, to help direct a national health policy which is something our government has had on the back burner for a number of years.

Physicians recognized years ago that Medicare would be a boon to their medical practice financially, but they continued to oppose it on the basis that those who could afford medical care should pay for it and, also, on the philosophical objection that the federal government can provide better care than the private sector.

This adversary relationship between the bureaucracy and organized medicine extends even to the regional health systems agencies. Missouri is the only state which has no certificate of need or 1122 Law, and, therefore, no appeals process from HSA decisions on capital expenditures for health costs.

The daily contact that each doctor has with his or her patient is the best public relations effort to be had. Missourians are concerned about health care costs and, as an organization, we have joined with the hospital association and the osteopathic association to spearhead the voluntary effort for cost containment in Missouri. This appears to be the only reasonable alternative to further federally mandated cost containment schemes.

A number of physicians believe that medical care insurance should include deductibles, coinsurance features and coordination of benefits. The chance of these types of coverage being worked into a labor union contract seem quite slim since the concept of first and total dollar coverage is negotiated at the national level in many union contracts and the local Blue agencies are not able to do anything about it. This total coverage concept serves to remove the policyholder as well as the physician and the hospital from consideration of costs in seeking medical services. This is a serious public problem as well as a problem of medical care.

Our Association has adopted a resolution calling for federal hospitals to be subject to PSRO in the same way as non-federal hospitals. Why should the VA hospitals, public health service hospitals and armed forces hospitals not be subject to review by a physician-controlled organization working from the outside? The same applies to federal hospitals and HSAs. If there are benefits to be derived from the PSRO or HSA, then these benefits should also accrue to the federal institutions.

In addition, a way should be found which would allow hospitals to deal with financial failure as private businesses do. In Kansas City, there is one new hospital with a debt service of over $50 per patient's bed-day. The other hospitals in the area are generally under $20 and many are in the $10 to $15 per bed-day rate for debt service.

How does a hospital presently handle the problem of low census and continuing high costs? Why, they ask Blue Cross for more money for the daily room rate for both Blue Cross and Medicare subscribers. One suggestion for meeting this problem was made by Walter McNerney, president of the National Blue Cross Association. He proposed that hospitals take beds out of service when they are empty and that Blue Cross not only help pay the closing costs but also pay the debt service on those beds. Perhaps financially successful hospitals should be asked to manage those which are failing. There are said to be approximately 1,800 excess beds in the Kansas City area.

The AMA-sponsored National Commission on the Cost of Medical Care made a number of recommendations following its study of a year ago. The report has several controversial recommendations and is being more fully studied by the AMA before being further implemented. There is a certain amount of glamour in a politician who says that he is going to change the system of medical care in this country, but there is little glamour in the lives of those who will be affected by the red tape or other barriers that do not presently exist.

Health maintenance organizations are boosted by the federal government as being the most reasonable alternative to fee-for-service medical practice. HMOs are misnamed, of course, in the sense that they do not provide services to maintain health which are not presently being provided by practicing physicians. They are prepaid health care plans, however, with an emphasis on outpatient care. This emphasis is heralded as the cost-saving heart of the plan. In many areas of the country, their rates of hospitalization are much lower than such rates are for patients seen i private practice. Whether this emphasis on cos saving will significantly reduce the quality of car is debatable. It is evident, however, that if fewe services are offered, the cost will be less. By an large, such plans deal with a working populatio and not the Medicare age group. The statistica successes of these groups should be judged in th light of the healthy population they serve. Mor attention should be paid to HMOs that fail, an there are many which have done so.

The next item I wish to discuss is health planning. Physicians believe in orderliness and planning, including the concept of planning for medical care. Unfortunately, there has not yet bee demonstrated a workable way to remove healt planning from political considerations. The thre most recent hospitals which have opened in th Kansas City area are an example.

Two of these hospitals were denied approval b the local health planning agency as being unnecessary for the community. Both appealed t the respective state agencies which existed befor the HSAs were established. In Missouri, the stat agency approved the plan; in Kansas, the stat agency disapproved the plan but was reversed b the Court. The third hospital opened withou benefit of having applied for permission since th comprehensive health planning agency no longe existed.

A number of changes in the planning law shoul be made, including deletion of the designate positions on HSA boards of VA hospitals and federally qualified HMO groups. These position should be replaced with provider positions mad up of at least 50% physicians. These plannin agencies are planning for medical care and only t an extremely limited extent for health. The larg expenditures with which they deal are for hospita and other items of capital equipment which ar part of the medical system. That system is mos responsive to the orders of physicians. Why is i necessary to dilute the effectiveness of healt planning by allowing physician participation i the planning boards to be reduced by having on majority of provider members on planning board be members of allied health professions whos duties in many instances are to carry out the orders of physicians?

One of the most serious problems of the presen health planning process is that it tends to promot the status quo and retard progress. One of th Kansas City area hospitals was rebuffed on tw different attempts in an effort to construct a heart institute as a regional facility. The evidence for their regional status was that approximately 40% of their heart referral patients came from outside the adjoining five-county area. Nevertheless, the proposal was postponed after many of the other area hospitals responded negatively to the proposal.

How could any of the great medical clinics of this country have gotten started with our present planning law? They couldn't have, due to parochialism on the part of their communities. Our present planning law engenders mediocrity and continuation of practices which need to be changed.

My last topic is that of health policy. We, as a nation and Missouri as a state, need to develop a policy directed primarily toward health and not specifically toward medical care. Those diseases which affect Americans most commonly in a physical and financial sense should be identified as their causes found. The three biggest killers of the 1960s were and still are heart disease, cancer and stroke. We know a good deal about the risk factors of these diseases.

In order to bring about a healthy population, our governmental program should make use of this knowledge. Expenditures of government funds should be considered not only in the light of the effect on the environment, but also the effect on individual health. How about a health impact statement before federal dollars are spent?

The Three Mile Island nuclear accident demonstrates acutely the importance of health concerns in the development of nuclear energy. We have a program of price support for the tobacco farmer and yet he is raising a crop which will be directly associated with more than 70,000 deaths from lung cancer alone in the United States this year. That is not to mention the thousands of other individuals who smoke and acquire the obstructive lung disease which eventually leads to death. Incentives must be found for the tobacco farmer to produce a different crop which will not adversely affect our population, and I am talking as a former smoker.

Patients who undergo coronary artery bypass operations are now instructed in a modified fat diet, rich in corn oil and soybean products and are advised on weight control. Why must these individuals wait until they have a significant heart disease and surgery before being made aware of the importance of proper dietary habits? Why not use the private advertising industry to see Americans on proper nutrition? Incentives for producing soybeans, corn oil, high fiber cereals and bread might be considered.

We as physicians should advise our patients on the apparent hazard of diets rich in animal fat and the measures they may take to prevent arteriosclerosis. We recognize that having the right parents will affect this disease.

As a nation and as a state, we need to set health goals. The death rate for coronary heart disease has already fallen by 28% in this country between 1968 and 1976. We also can improve our record in cancer and stroke with appropriate attention to reduction of smoking, detection and treatment of hypertension and detection of environmental hazards.

Physical fitness for adults as well as children should be a significantly more prominent part of our daily lives. I invite those of you who have been running for a while to participate in the fun run tomorrow morning at 7 AM at Forest Park. Those of you who wish to walk this three-mile course will be welcomed, also. Perhaps our state government should help promote the establishment of athletic courts, running courses and other health facilities as a way of encouraging a healthier population.

Physical fitness can be measured in terms of heart rate and endurance tests. We need to develop incentives to encourage physical fitness in our adult population because in the long run, this will result in less cost for medical care. Those who say that you cannot die in good health and eventually it will require hospitalization prior to death overlook the loss of productive years for those striken with preventable diseases before they have reached the Medicare age. Perhaps union contracts that promote physical fitness should be devised or tax incentive for employers might be encouraged to promote fitness.

We as a nation learned the lesson in Vietnam that we cannot conduct a successful guns-and-butter economy. Those of us who deal with medical care already realize that we cannot conduct a cigarette and health, abuse of alcohol and drugs and health or an over-eating and health type of economy. The importance of the individual responsibility for every person to develop those good habits which lead to better health cannot be overemphasized.

Thank you for bearing with me and my thoughts on what I believe are important to us as a state medical association.

Report of Mrs. A. J. Campbell, President of the MSMA Auxiliary

Mr. Speaker, Dr. Martin, Dr. Gardner, Delegates and Friends:

Thank you for this special opportunity to report the activities of the MSMA Auxiliary.

As I describe some of our accomplishments of this past year, it is my hope that you will agree that the members of your Auxiliary have been productive and effective individually and collectively . . . for we all believe in the Missouri State Medical Association, its purposes and ideals. And, we all believe in the concept of enthusiastic volunteerism because it provides a power that effects meaningful results and change.

A year ago, I asked the MSMA Council to challenge the Auxiliary with opportunities to be of real assistance to the Association. We received a major challenge in the request to provide an auxiliary legislative contact person for every representative and senatorial district in the state. We are doing everything we can to meet this challenge as rapidly as possible and to become an influential part of the vitally important MSMA legislative team. We have laid the groundwork, have established a network of contact persons and will continue to make this effort a priority.

Serving as HSA monitors is another challenge presented to us by President John Martin at our Fall Conference. With the help of Mr. Doug Viehland, MSMA Governmental Relations Director, we have laid new plans for accurate and comprehensive monitoring and will again provide auxiliary HSA monitors in all areas.

The MSMA Auxiliary believes that being included in the MSMA public relations program will produce positive results. We welcome thi opportunity to attend the public affairs seminars and to learn so that we can do our part in extending a positive image of medicine.

Time does not permit me to describe all of the various projects and volunteer efforts of members of our 25 individual component auxiliaries. I'm sure you know they are geared to lead and be involved in helping to solve health problems and assisting in health-related services for the young and old in their individual communities.

As Auxiliary presidents before me have reported in past years, Auxiliary membership continues to be a problem. We have gained 200 new members this year which is a substantial number. Unfortunately, our membership total has not increased. We now have 1,571 members. There are approximately 5,280 members of the MSMA. This means that there are approximately 3,700 missing members of the Auxiliary.

We have looked to you for help in this important concern and sincerely believe that the excellent new Auxiliary membership brochure provided by the Association will help to accelerate our membership efforts.

The brochure explains the purposes, activities and benefits of Auxiliary membership and extends an invitation to the physician's spouse to join. The fact that it will be distributed to the new MSMA members will provide many contacts with prospective members heretofore unavailable to the Auxiliary, and we thank you.

Realizing the ever-increasing need of medical students for financial assistance, we have worked very hard on their behalf this year on both the national and state levels.

As always, the MSMA Auxiliary has supported he AMA Educational Research Foundation which, incidentally, is the Auxiliary's only naional fund-raising project. I am proud to announce that our contribution this year is $11,465.76.

Our contribution to the Missouri State Medical Foundation to assist deserving Missouri medical students exceeds our contribution of last year by more than $1,000. I believe that our present contribution of $4,013.50 reflects the Auxiliary's greater efforts on behalf of the MSMF.

By this time tomorrow, we expect to increase both amounts many, many times . . . which provides the perfect opportunity for me to not only nvite all of you, but urge you to attend and enjoy he Auxiliary's Benefit Auction at 6:30 this evening in the Chase Club.

The auction is for every member of the MSMA and Auxiliary. There will be lovely hostesses to assist you. There will be a cash bar. Hors d'oeuvres will be served by the Auxiliary members. The famous "Singing Doctors of Springfield" will serve as auctioneers and nationally famous Jay Randolph will help you write your checks. You are invited to designate the fund to receive your contribution. We promise you that you will have an evening of purpose as well as a great time.

I would like to recognize and express my appreciation for the strong support and dedication of our Auxiliary members, the MSMA, officers, councilors and the staff, whose assistance has meant so much. I am grateful for this privilege to serve the MSMA Auxiliary and, thus, the MSMA.

You may have noted that I have selected specific projects to report today. I would like to suggest that threaded throughout them are our constant goals to make our members more knowledgeable in the fields of legislation and public affairs, our constant commitment to serve the MSMA, our constant efforts on behalf of public health and health education and our constant efforts to communicate to our fellow citizens the true meaning and benefits of organized medicine. When we pledge our loyalty and devotion to the auxiliary, we also pledge to support the medical association.

On behalf of the Auxiliary, we wish for you a successful and productive convention.

122nd Annual Session

April 17-20, 1980

Crown Center Hotel
Kansas City

121st Annual Session

MISSOURI STATE MEDICAL ASSOCIATION

House of Delegates

Chase-Park Plaza Hotel, St. Louis

April 19-22, 1979

This report of the 1979 MSMA Annual Session held at the Chase-Park Plaza Hotel in St. Louis is designed to provide each member with a concise but complete summary of the meeting and the actions taken by the House of Delegates. The minutes of this session are available to members of the MSMA at the Headquarters Office in Jefferson City.

FIRST SESSION

The First Session of the House was called to order at 10:30 AM on April 19, 1979 in the Khorassan Room with Edwin K. Burford, Speaker, presiding. The following officers, councilors and delegates were present during the 121st Annual Session.

OFFICERS

President	John N. Martin, St. Joseph
President-Elect	Andrew McCanse, Kansas City
Vice-President	Donald A. Fakhoury, N. Kansas City
Vice-President	Joseph V. Finnegan, St. Louis
Vice-President	H. B. Ivy, Springfield

COUNCILORS

1st District	Richard C. Hedges, N. Kansas City
2nd District	John P. Walterscheid, Hannibal
3rd District	Richard V. Bradley, St. Louis
4th District	Louis P. Hetlage, Troy
5th District	H. Peter Ekern, Mexico
6th District	R. John Torontow, Nevada
7th District	Irving H. Clark, Kansas City
8th District	Walter A. German, Springfield
9th District	Jack Wiles, West Plains
10th District	Eugene T. Hansbrough, Poplar Bluff

VICE-COUNCILORS

1st. District	Gary Dyer, St. Joseph
3rd District	Richard Fallon, St. Louis
5th District	Mary K. McCaffree, Jefferson City
6th District	Roy W. Pearse, Jr., Nevada
7th District	Ronald A. Youmans, Kansas City
8th District	Marvin A. Singleton, Joplin
9th District	Jack Wiles, West Plains
10th District	George H. Ladyman, Poplar Bluff

DELEGATES

First District

Buchanan	Gary A. Dyer, St. Joseph
Buchanan	Allen I. Herman, St. Josep
Buchanan	Wallace McDonald, St. Josep
Buchanan	Berwyn H. Moen, St. Josep
Buchanan	Earnest E. Wadlow, St. Josep
Clay	Richard P. Bowles, Libert
Clay	Donald E. Kuenzi, Kansas Cit
Clay	Truman B. Schertz, N. Kansas Cit
Clay	William D. Soper, Libert
Clay	F. A. Thomas, Kansas Cit
Clay	Robert D. Williams, Kansas Cit
Grand River	John Dixon, Brookfiel
Northwest Missouri	B. F. Byland, Maryvill
Northwest Missouri	Patrick B. Harr, Maryvill

Second District

Chariton-Macon-Monroe-Randolph	C. C. Cohrs, Moberl
Chariton-Macon-Monroe-Randolph	D. E. Eggleston, Maco
Chariton-Macon-Monroe-Randolph	R. V. Thompson, Moberl
Marion-Ralls-Shelby	Michael J. Bukstein, Hanniba
Marion-Ralls-Shelby	Carl R. Kruse, Palmyr
Marion-Ralls-Shelby	Edward M. Plowman, Hanniba

Third District

St. Louis	Morris Ale
St. Louis	Osias Almiro
St. Louis	Ulises C. Alvare
St. Louis	Luis B. Angl
St. Louis	Vernon H. Balste
St. Louis	M. Roman Banto
St. Louis	Robert Becke
St. Louis	Ralph L. Bidd
St. Louis	Arnold S. Bloc
St. Louis	George Bohigia
St. Louis	C. Read Bole
St. Louis	Robert L. Bolto
St. Louis	Leslie F. Bon
St. Louis	Robert D. Brooke
St. Louis	Seymour Brow
St. Louis	R. William Burmeiste
St. Louis	Carlo Caciol
St. Louis	Gerard M. Callagha
St. Louis	Donald E. Callaha

St. Louis	Jill M. Clayton
St. Louis	Harry O. Cole
St. Louis	Nicholas J. Colosi
St. Louis	Marshal Conrad
St. Louis	Thomas J. Cooper
St. Louis	Juan Corvalan
St. Louis	Cyril Costello
St. Louis	Edwin J. Cunningham
St. Louis	Pablo DeUngria
St. Louis	Robert Deitchman
St. Louis	James E. Edwards
St. Louis	Harry C. Eggleston
St. Louis	Daniel Fabito
St. Louis	Richard H. Fallon
St. Louis	Daniel M. Fraser
St. Louis	R. O. Federick
St. Louis	Paul L. Friedman
St. Louis	August W. Geise
St. Louis	Elliot F. Gellman
St. Louis	Joseph B. Grindon
St. Louis	Mohan Gursahani
St. Louis	David A. Hardy
St. Louis	George L. Hawkins, Jr.
St. Louis	John A. Headrick
St. Louis	Marijan Herjanic
St. Louis	Patrick C. Hogan
St. Louis	Vencel Hollo
St. Louis	J. Ted Jean
St. Louis	Tom Johnson
St. Louis	Otey S. Jones
St. Louis	Mohammed Kabir
St. Louis	A. R. Khan
St. Louis	Edward H. Kowert
St. Louis	John Laird
St. Louis	Paul U. Larson
St. Louis	George Lawrence
St. Louis	Leo LeBlanc
St. Louis	Jerome L'Ecuyer
St. Louis	Charles Lepley
St. Louis	Jack R. Lichtenstein
St. Louis	Francis X. Lieb
St. Louis	Jay Liss
St. Louis	J. Otto Lottes
St. Louis	Robert R. MacDonald, Jr.
St. Louis	Napoleon Maminta
St. Louis	A. Q. Manansala
St. Louis	Paul F. Max
St. Louis	Roger L. Mell
St. Louis	Jay Meyer
St. Louis	Jerry Middleton
St. Louis	Charles Miller
St. Louis	Arturo C. Montes
St. Louis	Wilbur Mullarky
St. Louis	William T. Newton
St. Louis	Charles Obermeyer
St. Louis	Lawrence W. O'Neal
St. Louis	William J. Ott
St. Louis	Theodore J. Paletta
St. Louis	Leopoldo Pardo
St. Louis	S. D. Parwartikar
St. Louis	Frederick D. Peterson
St. Louis	Richard T. Quick
St. Louis	David Reisler
St. Louis	Frank O. Richards
St. Louis	Edward M. Ring
St. Louis	Hubert A. Ritter
St. Louis	John P. Roberts
St. Louis	Michael Rumelt
St. Louis	Mickey Salmon
St. Louis	Antonio B. Santillano
St. Louis	Melvin Schwartz
St. Louis	John Sciortino
St. Louis	Donald G. Sessions
St. Louis	Herman Shyken
St. Louis	Edward J. Shaw
St. Louis	W. Gary Sherman
St. Louis	James C. Sisk
St. Louis	Kenneth R. Smith, Jr.
St. Louis	Samuel Soule
St. Louis	Bruce Stoliar
St. Louis	Donald Thurston
St. Louis	Timothy Turner
St. Louis	Frank Valach
St. Louis	Robert Valko
St. Louis	Ernest T. Velasco
St. Louis	Benito Veluz
St. Louis	Nicholas Vitale
St. Louis	Francis Walker
St. Louis	Bruce Walz
St. Louis	Newton White
St. Louis	Miles C. Whitener
St. Louis	James Whittico
St. Louis	David Wilkinson
St. Louis	Carol F. Williams
St. Louis	George Zografakis

Fourth District

Franklin-Gasconade-Warren	William R. Richardson, Union
Franklin-Gasconade-Warren	Gordon W. Stine, Washington
Franklin-Gasconade-Warren	George M. Workman, Hermann
Jefferson	Vicente D. Deles, Crystal City
St. Charles-Lincoln	Paul H. Rother, St. Charles

Fifth District

Audrain	Ben N. Jolly, Mexico
Boone	William C. Allen, Columbia
Boone	A. Sherwood Baker
Boone	Curtis Bourgeois, Columbia
Boone	W. D. Bradshaw, Columbia
Boone	George W. N. Eggers, Columbia
Boone	George J. Fuchs, Columbia
Boone	Larry E. Millikan, Columbia
Boone	Ben A. Moranville, Columbia
Boone	Gene Ridenhour, Columbia
Boone	Hugh E. Stephenson, Columbia
Callaway	Henry Durst, Fulton
Cole	Royal S. Garner, Jefferson City
Cole	Mary K. McCaffree, Jefferson City
Cole	Larry K. Stauffer, Jefferson City
Cole	Robert Tanner, Jefferson City
Lake of the Ozarks	Chris K. Fotopoulos, Osage Beach
Lake of the Ozarks	Ruth Kauffman, Versailles
Lake of the Ozarks	Otis Moseley, Osage Beach
Montgomery	S. J. Byland, Wellsville

Sixth District

Lafayette-Ray	C. T. Riley, Richmond
Lafayette-Ray	Jordan Kelling, Waverly
Pettis	A. J. Campbell, Sedalia
Saline	K. Thomas Papreck, Marshall
West Central Missouri	Arthur L. Hansen, Butler
West Central Missouri	L. M. Magruder, Nevada
West Central Missouri	Roy W. Pearse, Nevada

Seventh District

Jackson	Raymond B. Anderson, Kansas City
Jackson	Ali A. Arbab, Kansas City
Jackson	John D. Arnold, Kansas City
Jackson	Hugh R. Bailey, Kansas City
Jackson	Glenn A. Barr, Kansas City
Jackson	William H. Bryan, Jr., Kansas City
Jackson	Barbara N. Buchanan, Kansas City
Jackson	John G. Campbell, Kansas City
Jackson	Granville E. Clark, Kansas City
Jackson	Robert L. Coleman, Kansas City
Jackson	Calvin J. Curts, Kansas City
Jackson	Kendrick C. Davidson, Kansas City
Jackson	Lawrence L. Evans, Kansas City
Jackson	John R. Goheen, Kansas City
Jackson	Robert L. Goolsbee, Kansas City
Jackson	John A. Griffith, Kansas City
Jackson	Philip Gutek, Kansas City
Jackson	John Max Haight, Kansas City
Jackson	John W. Hardy, Kansas City
Jackson	Edwin M. Herman, Kansas City
Jackson	William D. Hoadley, Kansas City
Jackson	Michael F. Hughes, Kansas City
Jackson	Morton Jacobs, Kansas City
Jackson	Raymond W. Latham, Kansas City
Jackson	John Layle, Kansas City
Jackson	William B. Mangum, Independence
Jackson	Donald E. McIntosh, Kansas City
Jackson	William J. Medlicott, Kansas City
Jackson	Jack D. Moore, Kansas City
Jackson	Milton B. Ozar, Kansas City
Jackson	Larry G. Piepergerdes, Kansas City
Jackson	Robert H. Raich, Kansas City
Jackson	Dorothy D. Reister, Kansas City
Jackson	Wade V. Robinett, Kansas City
Jackson	Samuel U. Rodgers, Kansas City
Jackson	Robert M. Ross, Kansas City
Jackson	Wilber B. Spalding, Jr., Kansas City
Jackson	Elias M. Throne, Kansas City
Jackson	David A. Tillema, Kansas City
Jackson	George E. Volk, Kansas City
Jackson	James H. Whitaker, Kansas City
Jackson	George W. Wise, Kansas City
Jackson	Morris F. Wise, Kansas City
Jackson	W. Joel Wurster, Kansas City
Jackson	Ronald A. Youmans, Kansas City

Eighth District

Dallas-Hickory-Polk-Dade	Evelyn Griffin, Buffalo
Dallas-Hickory-Polk-Dade	Olin A. Griffin, Buffalo
Greene	Charles J. Ash, Springfield
Greene	Floyd R. Barnhill, Springfield
Greene	F. M. Corry, Springfield
Greene	Darrell D. Domann, Springfield
Greene	David W. Hall, Rogersville
Greene	H. B. Ivy, Springfield
Greene	Warford Johnson, Springfield
Greene	Donald E. Menchetti, Springfield
Greene	DeArmond Moore, Springfield
Greene	Stanley S. Peterson, Springfield
Greene	R. Wayne Shelton, Springfield
Greene	David L. Spalding, Springfield
Greene	Lee H. Vensel, Springfield
Greene	C. Courtney Whitlock, Springfield
Jasper	Edward Grim, Joplin
Jasper	Gil B. Manalo, Carthage
Jasper	Howard H. Roberts, Joplin
Jasper	Marvin A. Singleton, Joplin
Jasper	Robert Willcoxon, Joplin
Ozarks	P. B. Anderson, Neosho
Ozarks	Charles S. Christianson, Mt. Vernon
Ozarks	K. A. Glover, Mt. Vernon
Ozarks	Stanley D. Roper, Ozark
Webster	T. M. Macdonnell, Marshfield

Ninth District

Mid-Missouri	Hugh Bartlett, Rolla
Mid-Missouri	Deo Bhati, Salem
Mid-Missouri	Rae W. Froelich, Lebanon
Mid-Missouri	DeLane F. Wiench, Rolla
South Central	M. Hasan Choudhury, Mansfield
South Central	O. Martin Hasek, Mountain Grove
South Central	C. F. Smith, Houston

Tenth District

Butler-Wayne-Ripley-Carter	E. C. Carlson, Poplar Bluff
Butler-Wayne-Ripley-Carter	George H. Ladyman, Poplar Bluff
Butler-Wayne-Ripley-Carter	T. Eugene Ruff, Poplar Bluff
Butler-Wayne-Ripley-Carter	Kirby Turner, Poplar Bluff
Cape Girardeau Co. Area	Jean A. Chapman, Cape Girardeau
Cape Girardeau Co. Area	Charles H. Cozean, Cape Girardeau
Cape Girardeau Co. Area	John K. Holcomb, Cape Girardeau
Cape Girardeau Co. Area	Melvin C. Kasten, Cape Girardeau
Mineral Area	Norma Farmer, Farmington
Perry-Ste. Genevieve	C. A. Medrano, Perryville
Perry-Ste. Genevieve	Job Pontillas, Perryville
SEMO	Fuad H. Kandalaft, Dexter
SEMO	Edwin J. Masters, Sikeston
SEMO	John P. Sargent, Sikeston

DELEGATES-AT-LARGE

Edwin K. Burford, Jr., Cape Girardeau, Speaker
Lily Ann Hanes, St. Louis, Vice-Speaker

Past-Presidents

R. A. Chandler, Kansas City
James C. Cope, Rocheport
Max S. Franklin, St. Louis
L. T. Furlow, Crystal River, Fla.
Walter T. Gunn, St. Louis
Howard J. McAlhany, Springfield
Doyle C. McCraw, Bolivar
Guy N. Magness, University City
Robert Mueller, St. Louis
H. E. Petersen, St. Joseph
E. A. Stricker, St. James
Byron M. Stuart, Boonville
Paul R. Whitener, Chesterfield

STUDENT DELEGATES

Mr. Steven Adler, Washington University School of Medicine
Mr. Robert Backer, St. Louis University School of Medicine
Ms. Michele R. Berman, Washington University School of Medicine
Ms. Ann Lutzier, University of Missouri-Columbia School of Medicine
Mr. Paul J. Sheehan, St. Louis University School of Medicine
Mr. Anthony S. Shen, University of Missouri-Kansas City School of Medicine

Mr. Jeff Wald, University of Missouri-Columbia School of Medicine

Ms. Anita Wang, University of Missouri-Kansas City School of Medicine

Dr. Max Franklin, chairman of the Credentials Committee, reported that ten officers, ten councilors and 212 delegates were present and constituted a quorum.

The minutes of the 120th Annual Session in Kansas City and the Third Interim Session in Cape Girardeau were approved as published in Missouri Medicine.

Reference Committees

The speaker announced the appointment of the following reference committees:

CONSTITUTION AND BYLAWS

Thomas J. Cooper, St. Louis, Chairman
John K. Holcomb, Cape Girardeau
DeArmond Moore, Springfield
F. A. Thomas, Kansas City
W. Joel Wurster, Kansas City

MEDICAL EDUCATION AND PUBLIC WELFARE

A. Sherwood Baker, Columbia, Chairman
Jay L. Meyer, St. Louis
Kirby Turner, Poplar Bluff
Robert Thompson, Moberly
Steve Adler, Student, Washington University

RESOLUTIONS

Darrell D. Domann, Springfield, Chairman
Royal S. Garner, Jefferson City
George E. Volk, Kansas City
Lawrence W. O'Neal, St. Louis
L. M. McGruder, Nevada

REPORTS OF OFFICERS

Calvin J. Curts, Kansas City, Chairman
Harry C. Eggleston, St. Louis
Fuad H. Kandalaft, Dexter
Chris K. Fotopolous, Osage Beach
George Workman, Hermann

MISCELLANEOUS AFFAIRS

Gary Dyer, Joplin, Chairman
D. F. Wiench, Rolla
Michael F. Hughes, Kansas City
Edward M. Grim, Joplin
Robert R. MacDonald, St. Louis

The speaker introduced John N. Martin, M.D., president of the MSMA; Andrew McCanse, M.D., president-elect of the MSMA; and Mrs. A. J. Campbell, president of the MSMA Auxiliary, respectively. Each addressed the House and their remarks are published in this issue, beginning on page 365.)

After remarks by Dr. Hubert Ritter, St. Louis, president of the American Medical Association Educational Research Fund, Dr. Martin and Mrs. Campbell presented AMA-ERF checks to Missouri's five medical schools as follows: Washington University, $10,700.01; University of Missouri-Columbia, $5,846.74; Kirksville School of Osteopathic Medicine, $5,065; St. Louis University, $16,391.31; and University of Missouri-Kansas City, $4,084.51.

Dr. Martin announced that a special plaque expressing appreciation for his many years of dedication and outstanding service to the Missouri State Medical Foundation would be sent to Dr. Charles R. Doyle of St. Louis, Dr. Doyle is one of six officers who founded the MSMF in 1960. He served as secretary-treasurer until 1977 and has been a member of the MSMF Board of Trustees since 1960. Dr. Doyle was unable to attend the annual session.

Dr. Martin introduced Dr. Hoyt Gardner, president-elect of the AMA, who addressed the House of Delegates.

Dr. Irving H. Clark, Kansas City, presented a status report on MOMEDICO.

After serving as a delegate to the AMA for approximately 15 years, Dr. James C. Sisk, St. Louis, tendered his resignation as a delegate and expressed his appreciation for the privilege of having served the MSMA in this capacity. The Rules of Order were suspended and Dr. Duane E. Cozart, St. Louis, introduced the following resolution:

Resolved, that the House of Delegates of the Missouri State Medical Association regretfully accepts the resignation of Dr. James C. Sisk as a delegate to the American Medical Association and takes this opportunity to officially express its appreciation and affection to Dr. Sisk for his long valuable and continuing service to the medical profession.

The resolution was unanimously approved.

Supplementary Council Report

Dr. Richard V. Bradley, chairman of the Council, presented the following supplementary report of the Council.

"The MSMA Council met on Wednesday, April 18 in the Tiara Lounge of the Chase-Park Plaza Hotel.

"The minutes of the Feb. 3, 1979 meeting were approved.

"Dr. Claude Cooper, Ninth District councilor, submitted a request from the physicians in Laclede County to form their own Laclede County Medical Society. The MSMA has reviewed their proposed constitution and bylaws and find them in order. The Council agreed to grant a charter to the Laclede County Medical Society effective immediately.

"Mr. Royal Cooper, MSMA executive secretary, reported that the MSMA will have two candidates for office at the July AMA Annual Session — Dr. Hubert A. Ritter for a three-year term on the Board of Trustees and Dr. George Thoma for a position on the Council on Medical Education. He asked for assistance in their campaigns.

"The MSMA will sponsor a workshop for residents and young physicians to aid them in establishing their practices. It will be held in Columbia on May 3-4. The Council was asked to disseminate this information to any prospective attendees.

"The Commission on Public Affairs will hold its second public relations workshop dealing primarily with communications training in Columbia on May 12. Council members are urged to attend and encourage their constituents to attend.

"Several years ago, Boone County Medical Society suggested that the MSMA seek a method for increasing student participation in organized medicine. The final recommendation was to solicit donations from individual physicians to defray the expenses of these medical students to a portion of our Annual Session. The following donated for the sponsorship of students this year: St. Mary's Hospital, Kansas City (at the request of Dr. Robert Slickman); Drs. Roy W. Pearse, Nevada; Jack Wiles, West Plains; Otey S. Jones, St. Louis; John N. Martin, St. Joseph; William Allen, Columbia; Wallace Stacey, Independence; and Norma Farmer, Farmington.

"Two students from the University of Missouri-Kansas City and two students from Washington University are attending the session this year.

"Recently, Dr. Martin initiated a meeting of health related agencies to discuss many mutual problems. Included were the MSMA, Osteopathic Association, Dental Association, Podiatry Association, Optometry Association and Missouri Hospital Association. It was agreed that this was a profitable meeting and should be continued.

"Dr. Martin called the Council's attention to a planning meeting sponsored by Area V HSA for consumer members.

He expressed the feeling that if HSAs are to sponsor consumer meetings, they should also sponsor provider meetings.

"Dr. Martin said that he is impressed with the new look of MISSOURI MEDICINE and expressed his appreciation to Dr. Wilfred E. Wooldridge, editor, for a fine job.

"Dr. Martin reported that he had received a letter from Dr. James Sisk which states that he wishes to resign as an AMA Delegate. Dr. Martin and the Council expressed their deep appreciation for Dr. Sisk's past efforts and accepted his resignation with regret. Dr. Froelich added the regrets of the AMA delegation.

"Mrs. A. J. Campbell, MSMA Auxiliary president, reported that during the past year she has visited all 24 component auxiliaries and several counties in which organization is contemplated. The Auxiliary is in the process of appointing an auxiliary legislative contact person for each legislator and, also, members to monitor HSA meetings.

"The Auxiliary will sponsor a benefit auction in the Chase Club at 6:30 PM on Thursday. Proceeds will go to the Missouri State Medical Foundation or to the AMA/ERF (purchaser's choice). She mentioned other auxiliary activities being held during this convention.

"Dr. Burford, speaker of the MSMA House of Delegates, said that we will try to implement the intent of the recent resolution regarding a consent calendar. He reminded the Association officers to attend the Reference Committee on Reports of Officers meeting and the Councilor Advisors to attend the respective Reference Committee meetings to which their commission reports have been referred.

"The report of the Medical-Legal Committee, which was superseded by the Missouri Supreme Court's decision which ruled the professional liability review boards as unconstitutional, was accepted for information. Dr. Clark brought the Council up to date on the activities of MOMEDICO and indicated that an oral report would be given to the House of Delegates on Thursday. Dr. Clark was commended for his continuing efforts on behalf of MOMEDICO.

"Dean David R. Challoner and Dean M. Kenton King reported on new department chairmanships in their respective medical schools.

"Dr. Matthews, chairman of the Committee on Legislative Affairs, gave an updated report on the status of current legislation in the General Assembly. The Council commended Dr. Matthews for his outstanding work on bills which have a direct impact on the medical profession and our patients.

"Dr. Wilfred E. Wooldridge, editor of MISSOURI MEDICINE, reported a vacancy on the Editorial Board. He requested Council approval for the appointment of Dr. J. Donald Easton to fill this vacancy and Dr. Easton was appointed to this position. He is chairman of the Division of Neurology, University of Missouri-Columbia.

"Dr. Wooldridge said that his first year as editor has been informative and pleasurable and expressed his appreciation for the assistance of the Editorial Board, Publications Committee and staff.

"Mr. Cooper presented a report which showed the deficiencies in the present Hospital-Nurse Expense Insurance policy and the Phoenix Mutual Major Medical Plan. He outlined suggestions from both the Forrest T. Jones Company and the Fred S. James Company which would improve coverage available to the membership by switching to an insurance program offered by Mutual of New York.

"Under the Mutual of New York program, all MSMA members now covered by present plans could receive the new coverage without evidence of insurability.

"The Council recommended the termination of the present hospital-nurse expense policy and the termination of the Phoenix Mutual-sponsored Major Medical Plan and ou present term life insurance plan. They recommended tha the Association approve sponsorship of the Mutual of New York major medical program and the Mutual of New York term life insurance program.

"Mr. Cooper reported for the ad hoc committee established by the Council to study the possibility of an Association-sponsored collection agency for our membership. The Committee earlier had heard a presentation by IC Systems of St. Paul, Minn., which currently has annual deb collections of more than $25 million. Fifteen other medica associations and many other nationwide associations currently utilize the services of this company. The Committee found that the computerized system of collections and the overall lower cost to subscribing physicians would be beneficial to many members of the MSMA. The Council voted approval of the IC Systems for debt collection with the realization that members are free to use any collection agency they desire.

"Dr. Bradley briefed the Council on the meeting of the Committee to study the establishment of an MSMA Credi Union. Officials from the Ozark Air Lines Credit Union discussed the legal requirements for establishment of a credi union and told of the benefits which might be derived by MSMA members and their office personnel.

"The Council approved the study and requested the Committee to seek additional information and possible proposals for later implementation.

"The next Council meeting will be held in the Georgian Room on Sunday morning immediately following the adjournment of the House of Delegates."

Dr. Martin appointed the following members to the Committee on Nominations:

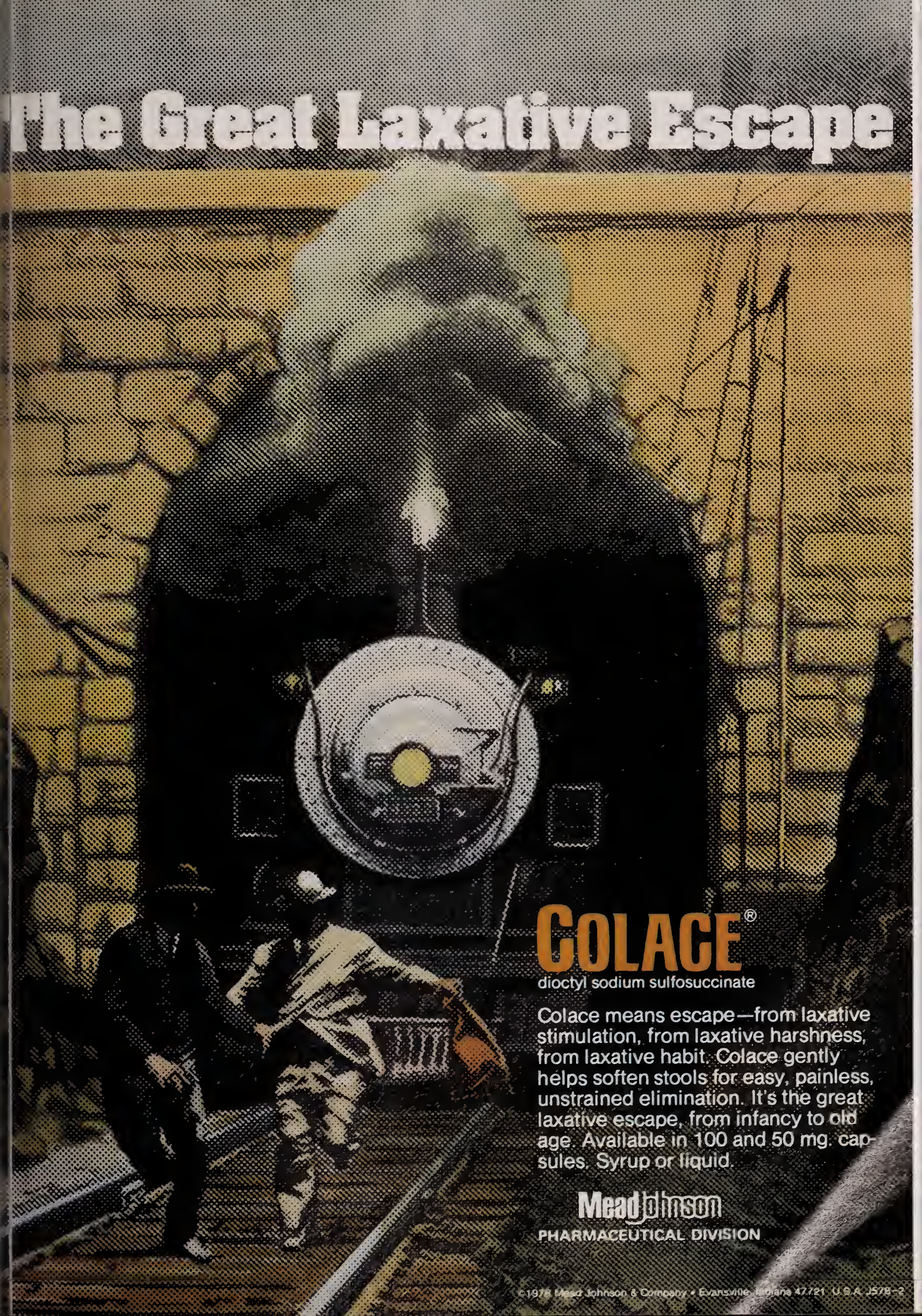
Gary A. Dyer, St. Joseph, *First District;* Carl R. Kruse Palmyra, *Second District;* George M. Bohigian, St. Louis *Third District;* William R. Richardson, Union, *Fourth District;* Larry E. Millikan, Columbia, *Fifth District;* L. M Magruder, Nevada, *Sixth District;* Donald E. McIntosh Kansas City, *Seventh District;* R. Wayne Shelton Springfield, *Eighth District;* Jack N. Wiles, West Plains *Ninth District;* and George H. Ladyman, Poplar Bluff, *Tenth District,* chairman.

At the request of the speaker, members of the House of Delegates stood for a moment of silence in memory of members of the Missouri State Medical Association who died in the past year.

The House considered proposed constitutional amendments which were introduced at the preceding session of the House of Delegates. These constitutional changes are published on **page 388.**

The speaker referred the delegates to the prefiled resolutions to be considered at the second session and reminded them that additional resolutions could be introduced at the second session for a two-thirds vote of acceptance by the House.

The speaker recessed the meeting of the House of Delegates until 4 PM on Friday, April 20, 1979.



COLACE®
dioctyl sodium sulfosuccinate

Colace means escape—from laxative stimulation, from laxative harshness, from laxative habit. Colace gently helps soften stools for easy, painless, unstrained elimination. It's the great laxative escape, from infancy to old age. Available in 100 and 50 mg. capsules. Syrup or liquid.

Mead Johnson
PHARMACEUTICAL DIVISION

©1978 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. J578-2

COMPATIBILITY

Eastern Tiger Swallowtail Butterfly
(Papilio glaucus)

Does it influence your choice of a peripheral/cerebral vasodilator*?

Vasodilan–compatible with coexisting diseases (e.g., glaucoma, diabetes)

Vasodilan has not been reported to affect the course of coexisting disease; it has not been reported to affect blood sugar levels or to raise intraocular pressure.

Vasodilan–compatible with concomitant therapy

Vasodilan has not been reported to affect the treatment of coexisting disease; it is compatible with such drugs as hypoglycemics and miotics.

Vasodilan–compatible with your total regimen for vascular insufficiency

Vasodilan can be a valuable adjunct in planning a total therapeutic program for vascular insufficiency.

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

VASODILAN® 20-mg tablets

(ISOXSUPRINE HCl)

20 mg q.i.d. recommended dosage

Mead Johnson
PHARMACEUTICAL DIVISION

©1978 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 U.S.A. MJL 7-4237R

This asthmatic isn't worried about his next breath...

he's active he's effectively maintained on

QUIBRON®

Each capsule or tablespoonful (15 ml) liquid contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg

- theophylline for effective around-the-clock bronchodilator therapy
- 100% free theophylline

Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema
Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.
Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e. clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.
Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.
How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Liquid in bottles of 1 pint and 1 gallon.
See package insert for complete prescribing information.

Mead Johnson
PHARMACEUTICAL DIVISION

© 1979 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. MJL 6-4220R4

SECOND SESSION

The second session of the House of Delegates was called to rder at 4 PM on Thursday, April 20 by Edwin K. Burford, Jr., M.D., speaker.

Dr. Franklin, chairman of the Credentials Committee, reported that ten officers, ten councilors and 264 delegates were present and constituted a quorum.

CONSTITUTION AND BYLAWS

Dr. Thomas J. Cooper, chairman, reported the following onsiderations of the Reference Committee on Constitution nd Bylaws:

Consent Calendar

1. Council minutes of June 8, 1978, Sept. 8, 1978, Dec. 8, 1978 and Feb. 2, 1979
2. Report of the Committee on Constitution and Bylaws
3. Report of the Committee on Planning
4. Report of the Commission on Medical-Legal Affairs
5. *Resolution #1* — Councilor District Change

There being no objections, the above items were considered as adopted.)

The House adopted the supplementary report of the Council.

Dr. Irving H. Clark's report on MOMEDICO was adopted.

House actions on the following Resolutions are reported in the section on "Resolutions" on pages 388-389.

Resolution #2 — House of Delegates Representation
Resolution #3 — Responsibilities of a Medical Witness
Resolution #4 — Student Membership in the MSMA
Resolution #7 — Expert Medical Witnesses and MSMA Membership
Resolution #19 — Amendment to Chapter IV, Sections 1 and 2

RESOLUTIONS

Dr. Calvin J. Curts of Kansas City, chairman, reported the following considerations of the Reference Committee on Resolutions:

Consent Calendar

1. Council minutes of June, September and December, 1978 and February and April, 1979
2. Report of the Commission on Medical Economics, Third Party Medicine and Governmental Relations
3. Report of the Action Committee on Socio-Economics
4. *Resolution #14* — Recognition of Adjunctive Treatment Resources for the Rehabilitation of the Alcoholic and Support of the Family
5. *Resolution #16* — Cooperation Between Organized Medicine and Missouri State Organizations With Regard to Appropriate Alcohol and Drug Abuse Education

(There being no objections, the above items were considered as adopted.)

House action on the following resolutions are reported in the section on "Resolutions" on pages 389-390.

Resolution #15 — Uniformity in Judicial Handling and Disposition of Alcohol-Related Convictions With the Emphasis on Rehabilitation of the Chronic Alcohol-Related Traffic Offender
Resolution #17 — Cooperation Between the Pharmacy Profession and Physicians to Increase Awareness of the Alcohol and Legally Prescribed Drug Abuse Problems

MISCELLANEOUS AFFAIRS

Dr. Gary Dyer of St. Joseph, chairman, reported the following considerations of the Reference Committee on Miscellaneous Affairs:

Consent Calendar

1. Council minutes of the June, September, December, 1978 and April, 1979 meetings
2. Report of the Committee on Legislative Affairs
3. Report of the Commission on Public Affairs
4. Report of the Action Committee on Political Affairs

(There being no objections, the above items were considered as adopted.)

House actions on the following resolutions are reported in the section on "Resolutions" on pages 388-390.

Resolution #6 — Professional Liability Review Board
Resolution #8 — Liens by Physicians Upon Physicians' Services
Resolution #13 — Replacement of Industrial Water Pollution Within the State of Missouri
Resolution #20 — Constitutionality of Professional Liability Review Board Authority
Resolution #21 — Review of Awards for Punitive Damages in Missouri Medical Liability Cases

MEDICAL EDUCATION AND PUBLIC WELFARE

Dr. A. Sherwood Baker of Columbia, chairman, presented the considerations of the Reference Committee on Medical Education and Public Welfare as follows:

Consent Calendar

1. Council minutes referred to this Committee
2. Report of the Committee on the Impaired Physician
3. Report of the Committee on Voluntary Health Agencies
4. Report of the Ad Hoc Committee, 121st Annual Session
5. Report of the Commission on Interspecialty Medicine
6. Report of the Commission on Continuing Education and Health Manpower.
7. Report of the Action Committee on Medical Affairs

(There being no objections, the above items were considered as adopted.)

House actions on the following resolutions are reported in the section on "Resolutions" on pages 388-389.

Resolution #5 — Physicians Assistants
Resolution #9 — Practice of Medicine by Unlicensed Persons
Resolution #10 — Accreditation of Paramedical Personnel

REPORTS OF OFFICERS

Dr. Calvin J. Curts of Kansas City, chairman, presented the considerations of the Reference Committee on Reports of Officers as follows:

Consent Calendar

1. Council minutes of April 16, June 3 and September 16 and November 5, 1978
2. Supplemental report of the Council meeting of April 18, 1978
3. President's Message
4. President-Elect's Remarks
5. Report of the President, MSMA Auxiliary
6. Report of the Secretary
7. Report of the Treasurer

8. Report of the Executive Secretary
9. Report of the Committee on Publications

(There being no objections, the above items were considered as adopted.)

The report of the Missouri State Medical Foundation was adopted, with the following addition:

"We are recommending that a committee be appointed by the president to investigate, study and review the activities of the Foundation and submit a complete report with recommendations to the next Interim Session of the House of Delegates. This committee to be charged especially with the responsibility to consider interest rates, flexibility of operation, financial self-sufficiency and the need for continued support by assessment of the membership."

House actions on the following resolutions are reported in the section on "Resolutions" on pages 389-390.

Resolution #11 — Proposed New MSMA Committee
Resolution #12 — Physician Participation in Armed Services Reserve
Resolution #18 — Endorsement of the Concept of an All-American Medical Hall of Fame in St. Louis

Unfinished Business

The following resolutions had been introduced 24 hours previously and were assigned to reference committees:
Resolution #22 — Good Samaritan Bill
Resolution #23 — Division of Family Services Claim Form
Resolution #24 — Support for a "Balance-the-Budget Amendment
Resolution #25 — Abortion
Resolution #26 — Continuing Medical Education Credits as a Requirement for Relicensure
Resolution #27 — Reapportionment of the House of Delegates
Resolution #28 — Missouri Council on Physical Fitness and Health
Resolution #29 — Implementation of Comprehensive School Health Curriculums for Missouri Elementary and Secondary Schools
Resolution #30 — National Health Insurance
The meeting was recessed until the third session on Sunday, April 22.

THIRD SESSION

The third session of the MSMA House of Delegates was called to order by Dr. Burford, speaker at 7:30 AM on Sunday, April 22.

Dr. Franklin, chairman of the Committee on Credentials, reported that ten officers, ten councilors and 283 delegates were present and constituted a quorum.

NOMINATING COMMITTEE

Dr. George Ladyman, chairman of the Committee on Nominations submitted the names of the following members on the slate of officers for the ensuing year:

President-Elect — Dr. Richard V. Bradley, St. Louis
Vice-President — Dr. Milton B. Ozar, Kansas City
Vice-President — Dr. Mary J. Merideth, Cassville
Vice-President — Dr. C. G. Stauffacher, Sedalia
AMA Delegate — Dr. Melvin C. Kasten, Cape Girardeau
AMA Delegate — Dr. Robert A. Slickman, Kansas City
AMA Delegate — Dr. Francis X. Lieb, St. Louis
(To fill unexpired term of Dr. James C. Sisk)
AMA Alternate Delegate — Dr. Hugh E. Stephenson, Jr., Columbia
AMA Alternate Delegate — Dr. Vernon H. Balster, St. Louis
AMA Alternate Delegate — Dr. George Bohigian, M.D., St. Louis
(To fill unexpired term of Dr. Francis X. Lieb, St. Louis)
Speaker — Dr. Edwin K. Burford, Jr., Cape Girardeau
Vice-Speaker — Dr. Jay Meyer, St. Louis

(There were no nominations from the floor. The slate of officers was elected by acclamation.)

Dr. John I. Matthews, secretary, announced that the following councilors and vice-councilors had been elected:

Second District — Dr. John H. Walterscheid, Hannibal
Vice-Councilor — Dr. Patricio Avila, Hannibal
Third District — Dr. Thomas J. Cooper, St. Louis
Dr. Richard H. Fallon, St. Louis
Dr. James M. Stokes, St. Louis
Dr. Theodore L. Paletta, St. Louis
Dr. Frederick D. Peterson, St. Louis
Vice-Councilor — Dr. Gerard M. Callaghan, St. Louis
Sixth District — Dr. R. John Torontow, Nevada
Vice-Councilor — Dr. A. J. Campbell, Sedalia
Seventh District — Dr. Donald McIntosh, Kansas City
Dr. Ronald A. Youmans, Kansas City
Vice-Councilor — William D. Hoadley, Kansas City
Eighth District — Dr. Walter A. German, Springfield
Dr. Marvin A. Singleton, Joplin
Vice-Councilor — Dr. Charles J. Ash, Springfield
Tenth District — Dr. Eugene T. Hansbrough, Poplar Bluff
Vice-Councilor — Dr. George H. Ladyman, Poplar Bluff

Mrs. J. Otto Lottes of St. Louis presented a check for $200 for the Missouri State Medical Foundation from the St. Louis Medical Society Auxiliary. (The St. Louis Medical Society Auxiliary and the St. Louis County Medical Society Auxiliary have consolidated to form the present St. Louis Metropolitan Medical Society Auxiliary.)

CONSTITUTION AND BYLAWS

Dr. Thomas J. Cooper, chairman, presented the considerations of the Reference Committee on Constitution and Bylaws at its second meeting as follows:
Resolution #4 — Student Membership in the MSMA
Resolution #27 — Reapportionment of the House of Delegates

(House actions on these resolutions are reported in the section on "Resolutions" on pages 388-391.

MISCELLANEOUS AFFAIRS

Dr. Gary Dyer, chairman, presented the considerations of the Reference Committee on Miscellaneous Affairs at its second meeting.

Resolution #22 — Good Samaritan Bill
Resolution #23 — Division of Family Services Claim Form
Resolution #24 — Support for a Balance-the-Budget Amendment
Resolution #25 — Abortion
Resolution #26 — Continuing Medical Education Credits as a Requirement for Relicensure
Resolution #30 — National Health Insurance

House actions on these resolutions are reported in the section on "Resolutions" on pages 390-391.

MEDICAL EDUCATION AND PUBLIC WELFARE

Dr. A. Sherwood Baker, chairman, presented the considerations of the Reference Committee on Medical Education and Public Welfare at its second meeting.

Resolution #28 — Missouri Council on Fitness and Health

Resolution #29 — Implementation of Comprehensive School Health Curriculum for Missouri Elementary and Secondary Schools

House actions on these resolutions are reported in the section of "Resolutions" on page 391.

Dr. B. A. Moranville, Columbia, presented the report of the Missouri Medical Political Action Committee, which now has a membership of 1,133 members.

Unfinished Business

Dr. Hawkins submitted *Resolution #7 — Expert Medical Witnesses and MSMA Membership* as amended by the Reference Committee on Constitution and Bylaws. *(House action on this resolution is reported on page 389.)*

Installation of Officers

The speaker invited the officers and councilors to stand in front of the podium where Dr. John I. Matthews, secretary, administered the oath of office.

Dr. Bradley, president-elect, was escorted to the speaker's stand where he made a brief acceptance statement. Mrs. Bradley also was escorted to the stand and introduced to the House of Delegates.

The speaker invited President Andrew McCanse to announce his committee and commission appointments for the 1979-1980 year. Members whose terms had not expired were not mentioned and it is assumed that they will continue to serve.

Committee Appointments

Committee on Constitution and Bylaws — Robert R. McDonald, St. Louis; R. Stacy Long, Kansas City, chairman for 1979-1980 (terms to expire in 1982).

Committee on Planning — Melvin C. Kasten, Cape Girardeau; Gerald Hoxworth, Mexico (terms to expire in 1984); Paul H. Rother, St. Charles, chairman for 1979-1980.

Committee on Voluntary Health Agencies — Darrell Domann, Springfield; Newton McCluggage, North Kansas City (terms to expire in 1982); John Arnold, Kansas City (to fill unexpired term — term expires in 1981); William C. Allen, Columbia, chairman for 1979-1980.

Committee on Legislative Affairs — Andrew McCanse, Kansas City; Richard V. Bradley, St. Louis; Eugene T. Hansbrough, Poplar Bluff; Louis P. Hetlage, Troy; Hubert A. Ritter, St. Louis; Robert E. Bregant, Jefferson City; John I. Matthews, Jefferson City, chairman for 1979-1980.

Commission Appointments

Commission on Public Affairs — Byron Watts, Jefferson City; George Bohigian, St. Louis; Lawrence W. O'Neal, St. Louis; Vernon Balster, St. Louis (terms to expire in 1982); Ben A. Moranville, Columbia, chairman for 1979-1980.

Commission on Medical Economics, Third Party Medicine and Governmental Relations — Harry Eggleston, St. Louis; Mary McCaffree, Jefferson City; Max A. Heeb, Sikeston; James L. Carpenter, St. Charles, chairman for 1979-1980 (terms to expire in 1982).

Commission on Continuing Education and Health Manpower — Lloyd A. Hollinger, Kansas City; William D. Bradshaw, Columbia; Manuel Comas, St. Louis; John C. Soucy, St. Charles; Charles A. Worley, Sweet Springs (terms to expire in 1982); George H. Ladyman, Poplar Bluff, chairman for 1979-1980.

Commission on Medical-Legal Affairs — David Hall, Springfield; William Medlicott, Kansas City; Jay Meyer, St. Louis; Bernard Draper, Rolla; Gil Manalo, Carthage (terms to expire in 1982); Edward Bare, Tarkio (to fill unexpired term, term expires in 1981); William Medlicott, Kansas City, chairman for 1979-1980.

Committee on The Impaired Physician — Arnold S. Block, St. Louis (term expires in 1982); Donald E. McIntosh, Kansas City, chairman for 1979-1980.

Commission on Interspecialty Medicine – (It is the policy for the president of the Association to appoint representatives of the specialty organizations making up the Commission on Interspecialty Medicine as recommended by the specific organizations. Some of these organizations had not provided names of their proposed representatives by this date. Following are appointments of representatives who had been recommended.)

Missouri State Allerty Association — J. Allen Thiel, St. Louis; *Missouri Society of Anesthesiologists* — Gale O. Jones, Kansas City; *Missouri Dermatological Society* — Larry Millikan, Columbia; *Missouri Academy of Family Physicians* — C. W. Chastain, Bonne Terre; *Missouri OB-GYN Society* — George Fuchs, Columbia; *Missouri Ophthalmological Society, Inc.* — Truman B. Schertz, North Kansas City; *Missouri Orthopedic Society* — Ronald Hertel, St. Louis; *Missouri Society of Pathologists* — T. J. Cooper, St. Louis; *Missouri Academy of Pediatrics* — Donald L. Thurston, St. Louis; *Missouri Radiological Society* — William McAllister, St. Louis; *Missouri Chapter, American College of Surgeons* — R. O. Frederick, St. Louis; *Missouri State Surgical Society* — Cyril Costello, St. Louis; *Missouri Thoracic Society* — James R. Wiant, St. Louis.

The speaker advised the House of Delegates that Dr. Lily Ann Hanes, vice-speaker, is leaving the state to practice in Florida and expressed appreciation for her assitance during the years she served as vice-speaker. Dr. Hanes spoke briefly to the delegates.

The speaker adjourned the 121st Annual Session of the House of Delegates.

Drs. Hansbrough and Hetlage To Head MSMA Council

Dr. Eugene T. Hansbrough, Poplar Bluff, was elected chairman of the Council at the Council meeting which followed the MSMA House of Delegates session on April 22. Dr. Louis P. Hetlage, Troy, was elected vice-chairman.

The Council also reelected Dr. John I. Matthews of Jefferson City as secretary of the MSMA and elected Dr. Carol F. Williams of St. Louis as treasurer for 1979-1980.

Reports of Committees and Commissions

REPORT OF THE COMMITTEE ON THE IMPAIRED PHYSICIAN

The Committee on the Impaired Physician met on Oct. 8, 1978 and held a telephone conference on Jan. 31, 1979. The Committee is pleased to report that on Jan. 1, 1979, the MSMA Impaired Physician Program became operational.

As directed by the MSMA House of Delegates in April, 1977, the Committee has established a program for locating, contacting and offering rehabilitative assistance to physicians who have become impaired. During the October, 1978 meeting, the following objectives were set:

1. To identify doctors who are disabled by reason of their addiction to or abuse of drugs, including alcohol;
2. To maintain the strictest confidence regarding referrals made by the impaired physician, family or colleagues;
3. To motivate the physician to voluntarily enter a treatment program;
4. To assume an advocacy role on his or her behalf;
5. To aid the physician in reentering professional activities after successful treatment; and
6. To provide a means of protecting his or her patients, medical community, family and the doctor himself from the consequences of nontreatment, incomplete treatment or failure of treatment.

With these objectives in mind, the Committee proceeded to develop the program. Since becoming operational, the following accomplishments have been achieved by the Committee:

1. A 24-hour "hot line" number (314-636-5744) was installed in the MSMA Headquarters where impaired physician calls are received. This number is being advertised in the Missouri State Medical Association journal and the *Missouri Auxiligram;*
2. The Committee compiled a list of physicians who would be willing to serve as confronters. To date, forty-five (45) physicians throughout the state have offered their services;
3. An informational pamphlet was produced for distribution to the membership and appropriate groups;
4. A Speakers' Bureau was formed to go out and discuss the problems of the impaired physician and to promote the program;
5. A list of treatment facilities for inpatient referrals was compiled;
6. A Confronters Manual was developed and printed for physicians who will serve in this capacity. The manual outlines their responsibilities, techniques and approaches during confrontation with an Impaired Physician;
7. An attempt is presently being made to establish liaison with the Missouri Association of Osteopathic Physicians and Surgeons;
8. The Committee is identifying the Chairman of Impaired Physician Programs in adjoining states and attempting collaboration in the observation and supervision of impaired physicians who have relocated from another state to the State of Missouri;
9. A cooperative liaison has been established with the Missouri State Board of Registration for the Healing Arts and the Department of Mental Health, Division on Alcoholism and Drug Abuse.

As of Feb. 15, 1979, the Committee has received three referrals via the 24-hour telephone. These calls are in the process of being contacted.

The Committee wishes to thank the MSMA membership and Councilors for their help and cooperation during the development of this program. However, the eventual success will depend on an even greater effort. We must face the unpleasant realities of physician impairment. We know that it is a much greater service to our impaired colleagues to report their problems than to ignore them. This is our responsibility to the profession, our colleagues and to our patients. We cannot accept less.

Donald E. McIntosh, *Chairman*
James E. Young
Henry V. Guhleman
David L. Ohlms
Arnold S. Block

REPORT OF THE COMMITTEE ON LEGISLATIVE AFFAIRS

Although most physicians are acutely aware of the attempts by the Federal Government to further regulate and control the practice of medicine, your Committee on Legislative Affairs fears that many MSMA members are not cognizant of the threat posed by state legislation.

Nearly any controversial issue which is found on the national level finds its way into proposed legislation before the Missouri General Assembly. Examples of these issues are attempts by Legislators to include physician's offices in Certificate-of-Need statutes, bills calling for direct payment for services of nurse practitioners and physician's assistants, a "State Health Insurance Program" and many, many others.

Your Committee reviews all bills introduced into the General Assembly and flags those which will (or could) have an effect on medicine or health. The Committee then evaluates each of these bills and decides whether to recommend a specific position to the Council. Then, if Council approval is granted, the Committee prepares testimony and arranges for expert medical witnesses to appear either in support or opposition to a bill.

The Committee is currently following more than 150 bills, many of which could have a vital impact on the practice of medicine. Committee members reiterate that the Committee (and the Council) and the staff cannot guarantee that medicine's wishes will be followed by the Legislature.

Now, more than ever, medicine needs the active involvement of *all* MSMA members in providing our representatives and senators with medicine's views. You, the one who votes and supports a particular lawmaker, can have much more influence on that person than anyone in Jefferson City. Our Committee stands ready to provide any MSMA member with additional information on the overall legislative scene or on a particular bill. If you are willing to contact your lawmaker or testify on bills, please inform MSMA Headquarters so that we can help with arrangements.

John I. Matthews, *Chairman*
John N. Martin
Andrew McCanse
Richard V. Bradley
E. T. Hansbrough
Hubert A. Ritter
Robert E. Bregant

REPORT OF THE COMMITTEE ON PLANNING

At the request of this House of Delegates and the Council, your Committee on Planning met in May, 1978 to again consider the subject of representation in the House and on the Council.

The Committee presented three recommendations to the Council which were later relayed to the House at the Interim Session. These recommendations called for election of councilors by a "weighted vote" method, requested that the House continue at its present makeup for a sufficient time to determine if the new system works, and stated that Missouri's delegates to the AMA should continue to be elected on an "at-large" basis. Variations of these recommendations have been approved by the House and Council.

The Committee also stated that the House, before considering further changes in House representation, should determine whether the House should remain a "federation" or change to a "democratic" body.

Your Planning Committee is hopeful that the representation issue will subside for some time so that this Committee, the Council and the House can spend more energy in other areas of concern to our patients and our profession.

Paul H. Rother, *Chairman*
James C. Cope
Melvin C. Kasten
Harry D. Haas
Francis X. Lieb
James A. Hasek
E. Rule Olson
J. Will Fleming
William W. Haynie
Joseph R. Prokop

REPORT OF THE COMMITTEE ON PUBLICATIONS

The 75th volume of Missouri Medicine was completed with the publication of the December, 1978 issue. During the year, 13 issues were printed and distributed. Ten of these issues contained scientific articles, special articles and features, organizational reports, monthly messages from the presidents of the Association and the MSMA Auxiliary and news and items of interest to members of the medical profession. The February issue contained the proceedings of the Third Interim Session. The July 1 issue contained the official proceedings of the 1978 (120th) Annual Session of the MSMA House of Delegates. The August 15 issue is the annual Membership Roster.

There were two special issues of the Journal. The scientific articles in the April issue were contributed by members of the faculty of the University of Missouri-Columbia School of Medicine and the scientific articles in the December issue were from members of the staff of Ellis Fischel State Cancer Hospital and Cancer Research Center.

During the year, 39 scientific articles and 11 special articles were published. Most of the articles were written by Missouri authors.

Joseph V. Finnegan, M.D., who had served as editor of Missouri Medicine for 17 years, asked to be relieved of this assignment. Wilfred E. Wooldridge, M.D., his successor, accepted the appointment as editor by the MSMA Council during its meeting which immediately preceded the 120th MSMA Annual Session at the Crown Center Hotel in Kansas City. The editors wish to express appreciation to all who submitted scientific manuscripts and to all other individuals, institutions and organizations, including the administrations, faculties and publications departments of the University of Missouri in Columbia and Kansas City, St. Louis University, Washington University, the Ellis Fischel State Cancer Hospital and Cancer Research Center for their valuable contributions.

The complete financial report for the Journal is included in the financial statement of the Missouri State Medical Association for 1978. This report is published in the March 1979 issue of Missouri Medicine and is included in the Delegate's Handbook. At year's end, Journal circulation was 5,654.

Wilfred E. Wooldridge, *Chairman*
Ernest Lorenc
William C. Mixson
Charles S. Sherwin
Byron M. Stuart

REPORT OF COMMITTEE ON VOLUNTARY HEALTH AGENCIES

On July 30, 1978, the Committee on Voluntary Health Agencies met with representatives of five voluntary health organizations at the Hilton Inn in Columbia.

The discussion among the Committee and the representatives led to the following suggestions for coordinating efforts of the MSMA and the voluntary health agencies: (1) The organizations expressed a willingness to help the MSMA on legislation they both support or oppose. (2) The group discussed the need for physicians to be better informed on educational programs and services available from the various agencies so they can recommend the agency or agencies to their patients who would benefit from the services offered. (3) The group agreed that there is a need for greater emphasis on prevention of diseases. Ways of approaching schools to provide information on better health habits were suggested.

Some members presented a proposal that local medical societies work with some of the voluntary health agencies to conduct seminars on preventive medical care, such as genetic counseling. The Missouri Association for Retarded Citizens indicated their willingness to assist in conducting programs on genetic counseling. As a result of this meeting, members of the MSMA staff have met with representatives of the Missouri Association for Retarded Citizens to discuss possible programs for physicians concerning mental retardation. The MSMA is currently cooperating with the Retarded Citizens Association on a survey to determine what programs are needed in Missouri.

Again this year, during the meeting, the group discussed the effect National Health Insurance would have on the voluntary health organizations. One representative viewed NHI as the chance to receive government as well as private funding. Most of the Committee and agencies agreed that, even with NHI, people in high-risk situations would need the advocacy provided by the voluntary health organizations.

The Committee and the representatives present agreed that these biennial meetings are valuable to maintain open communications between the MSMA and the voluntary health agencies, especially for those organizations which have few or no physicians on their governing boards.

William C. Allen, *Chairman*
Joseph L. Fisher
Guy N. Magness
Paul S. Quinn

REPORT OF ACTION COMMITTEE ON MEDICAL AFFAIRS

This Committee was established following the April, 1978 House of Delegates meeting. Its functions and duties include working toward the satisfactory resolution of disputes between medical staffs of hospitals and hospital administrations or boards of trustees. It also is charged with developing solutions to problems of interference with patient-physician relationships.

Its most important assignment is in the area of health planning. We hope to soon have a representative for Health Systems Agency affairs from each component society.

Most of the work during the past year has been with the Missouri Voluntary Cost Effectiveness Program. This is composed of representatives of the Missouri Hospital Association, the Missouri Association of Osteopathic Physicians and Surgeons and our Association. It is our state's component in the national voluntary effort.

Richard V. Bradley, *Chairman*

REPORT OF ACTION COMMITTEE ON POLITICAL AFFAIRS

Your Committee has been busy the past year developing a list of Missouri State Medical Association members and their wives who are willing to contact their Senators and Representatives on important legislation concerning medicine.

In a survey taken immediately after this Committee was activated, it was found that only half of Missouri's state senators and about one third of the state representatives had MSMA "Legislative Contacts." Since the inception of this Committee, the percentages have increased to where there is now at least one "Contact" for each state senator and about two thirds of the state representatives. It is the aim of this Committee to secure "Contacts" for all of our state and national lawmakers. In this way, hopefully, medicine will be better able to express its views to those individuals who pass the laws which so vitally affect our profession and our patients.

"Legislative Contacts" receive a weekly "Legislative Report" during the session of the General Assembly. This report describes the important bills and requests the "Contacts" to relay their feelings on particular bills to their lawmakers. If you would like to receive this report and are willing to contact your senator or representative, write to MSMA Headquarters for further details.

Walter A. German, *Chairman*

REPORT OF ACTION COMMITTEE ON SOCIOECONOMICS

Our Committee was formed after the MSMA House of Delegates adopted the bylaws change to allow the Association to "bargain collectively or negotiate on behalf of the members."

Our first action was to obtain authorization from all MSMA members who will allow the Association to negotiate for them. Approximately 1,200 MSMA members have signed and returned the authorization to date.

We have developed the following objectives for our Committee:

1. Identify specific problems
2. Assemble pertinent data and research problems
3. Negotiate solutions
4. Devise specific action plans
5. Coordinate all negotiation activities
6. Give assistance to all physicians, medical groups, etc. as requested for negotiating problems
7. Educate MSMA members on the use and techniques of negotiations

The MSMA has approved a workshop on "Negotiating Techniques" to be held in the fall of 1979.

The Socioeconomic Committee was created so that the Missouri State Medical Association might provide a service for its members. If a physician believes he has been aggrieved against by a third party, this Committee will intervene on behalf of the physician if he desires this action. Under no circumstances are we talking about withholding services from patients. Never!

Undoubtedly, the Missouri State Medical Association can prove more effective in dealing with third party carriers than an individual physician. The Action Plan has been developed so that the Missouri State Medical Association can aid its members. The implementation of the plan rests with the individual physician.

E. T. Hansbrough, *Chairman*

REPORT OF THE COMMISSION ON CONTINUING EDUCATION AND HEALTH MANPOWER

The Commission on Continuing Education and Health Manpower appointed the following two Ad Hoc Committees: Ad Hoc Committee on Continuing Medical Education and Ad Hoc Committee — 121st Annual Session. These Ad Hoc Committees implemented the directives of the MSMA Council, and details of the Committee action can be found in the Ad Hoc Committee reports published herein.

During 1978 the Commission with the cooperation of the Commission on Interspecialty Medicine have formulated 36 scientific sessions for the 121st Annual Session. The scientific portion of the 121st Annual Session has been approved by the American Medical Association for Category 1 credit and it is approved for prescribed and elective hours through the American Academy of Family Physicians.

George H. Ladyman, *Chairman*
Gerald M. Callaghan
Charles M. Mullican
Larry Ozenberger
George D. Comfort
Ronald T. Hill
Wilbur A. Mullarky
Marvin A. Singleton
W. Wayne Boydston
W. Thomas Morgan, Jr.
George X. Trimble
William D. Bradshaw
Manuel R. Comas
John C. Soucy
Charles A. Worley

REPORT OF THE AD HOC COMMITTEE — 121st ANNUAL SESSION

The Committee reviewed the critique sheets of the scientific sessions sponsored during the 120th Annual Session. After reviewing these critique sheets, it was generally agreed that in the future, there should not be any conflict with the Opening General Session and that this Committee would make every effort to alleviate conflicts between various scientific sessions. It was also felt that the same format should be continued so as to allow physicians the opportunity to attend the various scientific sessions.

The Commission on Interspecialty Medicine directed a recommendation to the Ad Hoc Committee to consider awarding $500 plus expenses to out-of-state speakers. After a considerable amount of discussion, the Committee felt that the present policy of providing an honorarium of $150 plus expenses, is sufficient.

The Committee would like to express sincere appreciation to the representatives of the MSMA Commission on Interspecialty Medicine and the voluntary health agencies for the uality of programs to be sponsored during the 121st Annual ession.

George H. Ladyman, *Chairman*
William C. Allen
W. Wayne Boydston
John M. Laird, Jr.
William D. Bradshaw
Ronald T. Hill
Marvin A. Singleton
Charles N. Mullican

REPORT OF THE AD HOC COMMITTEE ON CONTINUING MEDICAL EDUCATION

There was a great deal of discussion concerning the re-ponsibility in continuing medical education that the CCME has assumed since July 1, 1977. This organization is omposed of members of the American Board of Medical pecialties, American Hospital Association, American Medi-al Association, Association for Hospital Medical Education, ssociation of American Medical Colleges, Council of Medi-al Specialty Societies, Federation of State Medical Boards of he U. S., Inc., federal government and public members.

The AMA, through the House of Delegates, encouraged he LCCME to adopt the criteria that the AMA had de-eloped, but expected that they would be refined.

In 1975, Missouri was accredited as a sponsor for continu-ng medical education and had the authority to accredit nstitutions and organizations as sponsors for continuing nedical education activities. In the 1975 AMA House of elegates, California submitted Resolution No. 100 that ndicated "the system of state accreditation had been suc-essful and would the four AMA representatives try to assure he same procedure be continued by the LCCME" (to certify hat the states had approved). An amended version of this esolution slipped through the House of Delegates, which esulted in the LCCME having the authority of accredita-ion. Therefore, this resolution asked that the states forward heir recommendations to the LCCME for final approval. hus, each state relinquished its authority of accreditation.

After a considerable amount of work on the part of this ommittee, Resolution No. 15 was introduced by the Com-nission during the 1978 Interim Session and approved and vas submitted to the AMA for the December, 1978 House of elegates. The Missouri resolution was incorporated with hree other states to read as follows:

> *Resolved,* that the American Medical Association affirms the concept of accreditation of continuing medical education by state medical associations whose continuing medical education standards meet American Medical Association or Liaison Committee on Continuing Medical Education (LCCME) continuing medical education standards; and be it further
>
> *Resolved,* that the American Medical Association seeks a modification of the Bylaws of the Liaison Committee on Continuing Medical Education (LCCME) which reflects the accreditation of continuing medical education by state medical associations with accreditation standards approved by the AMA or the LCCME.

There was a lengthy discussion concerning mandatory con-inuing medical education in the state of Missouri as a condi-ion for membership in the Missouri State Medical Associa-ion. As a result of varying opinions, this matter was referred o the Council for their judgment and decision. It was further elt that the Council could accurately reflect the feelings of heir respective constituents concerning this matter.

George H. Ladyman, *Chairman*
John R. Dixon
Patricio C. Avila
Kenneth Bruns
John C. Soucy
William D. Bradshaw
W. Wayne Boydston
George X. Trimble
Marvin A. Singleton
Bernard Draper

REPORT OF THE COMMISSION ON INTERSPECIALTY MEDICINE

The Chairman presented a list of obsolete procedures identified by the various specialties and asked that each representative present this list to their respective organization for approval.

This list of obsolete procedures was presented to the Council on February 3 and the Council accepted these procedures for information. Many of the procedures identified on this list have been known to the medical profession for sometime and a few of these procedures still have application in individual cases and when that application can be documented, these procedures may be utilized. This list will be published in Missouri Medicine and also sent to the chief of the medical staff in each hospital in Missouri.

There was a great deal of discussion concerning the honorarium for out-of-state speakers and the attendance at the various medical specialties at the Annual Session. It was moved and seconded that the program committee for the 121st Annual Session consider awarding a larger honorarium, plus expenses, to out-of-state speakers. Dr. Bradley was asked to carry the Commission's concerns about the program back to the Council and request appropriate steps be taken to improve the program in consultation with the specialties.

The representative from Pediatrics informed those present that the federal legislation regarding the handicapped child and the education thereof has nothing regarding the evaluation of the children by a physician. The state of Missouri, at this time, is allowing teachers' aides, janitors, to refer children for special evaluation concerning a handicapped situation. It ought to be the physician's role to refer and evaluate these children.

There was a considerable amount of discussion regarding the qualifications that one must meet in order to serve on a Professional Liability Review Panel. It was moved and seconded that the Legislative Committee consider changing "residency" to "those who practice in the state of Missouri" portion of the review panel qualifications.

The State Health Planning and Development Agency forwarded questionnaires to specialty representatives in an attempt to develop a set of standards which would help determine the need for new services. These questionnaires were made available to the representatives of the appropriate specialties.

This Commission would like to express its appreciation for the cooperation and interest of those who have made these accomplishments possible.

Thomas J. Cooper, *Chairman*
William D. Owens
Larry E. Millikan
Charles W. Chastain
George L. Hawkins, Jr.
Larry K. Thurston
Franz U. Steinberg
William H. McAlister
Clement B. Grebel
Duane Q. Hagen

R. O. FREDERICK
J. ALLEN THIEL
MILTON B. OZAR
DANIEL J. HURST
GEORGE J. FUCHS
WILLIAM P. LAMPROS
CYRIL J. COSTELLO
ROBERT E. KUHLMAN

REPORT OF COMMISSION ON MEDICAL ECONOMICS, THIRD PARTY MEDICINE AND GOVERNMENTAL RELATIONS

Most of the work of the Commission during the past year has dealt extensively with the Medicaid program.

During its August meeting, all aspects of the Medicaid Program in Missouri were thoroughly discussed by the Commission. The continued refusal of the Missouri Division of Family Services and the Department of Social Services to request an adequate appropriation from the General Assembly to fund this program that was established to provide first-class medical care for some of the more unfortunate citizens of Missouri was carefully noted.

The MSMA House of Delegates in 1966 did by resolution endorse in principle the enactment of legislation similar to the present Medicaid Program, and they further reiterated and reaffirmed their endorsement of this principle in 1968.

The Commission recommended that the MSMA endorsement of this program be withdrawn and that a resolution to this effect be drafted and included in the business of the House of Delegates for the November Interim Session. This resolution was adopted.

We are still attempting to obtain the current level of participation of Missouri physicians in the Medicaid Program. Hopefully, this information can be obtained by increments of dollar amounts of reimbursement.

It was also noted that MSMA members must contact their legislators in the Missouri General Assembly and carefully explain the inadequacies of the program and further explain that the low reimbursement level prevents several physicians from practicing in either the "inner-city" or rural areas of the state.

The Commission also discussed the recent implementation of a second opinion information program by the Department of HEW for Title XVIII and XIX patients and the general public.

HEW is launching a nationwide program to encourage all patients to voluntarily seek a second opinion before undergoing elective surgery. Beginning September 1, the Department will pay 80% of reasonable costs for second opinions under Medicare Part B and states are being encouraged to implement a similar program for Medicaid patients. If a second physician recommends against surgery, the patient still would be covered if he elects to have the operation. In addition, a decision to forego surgery does not prohibit the patient from having surgery at a later date.

A free referral service —available to both public and private patients — will indicate which physicians accept Medicare and Medicaid payments for consultations. According to HEW, patients are not required to use physicians on the lists for a second opinion and may instead ask the original physician for a referral or obtain a consultation independently. A physician rendering a second opinion would be discouraged from performing the surgery unless specifically requested to do so by the patient. HEW also has indicated that Medicare Part B will cover the cost of a third professional opinion.

It appears that the General American Life Insurance Company will be both the list developer and list holder for any locality within their service area. However, it is understood that the St. Louis Medical Society and the Missouri Association of Osteopathic Physicians and Surgeons have expressed interest in being involved in the administration of the program. Quite possibly, patients interested in obtaining a second opinion would need to contact a central "800" number and then place another phone call to obtain the names of physicians from whom second opinions could be obtained. It was noted that the MSMA had indicated that it did not care to become a list developer or list holder for this program.

Also discussed were other insurance company second opinion programs for surgery. Staff was directed to furnish the AMA resolution recently adopted on this subject to all insurance companies.

The Commission, on motion, objected to the following provisions in the Prudential Program: (1) the insurance company, in designating the surgeon for the second opinion, denies the patient the right to select a physician of his choice; (2) the establishment of a "closed panel" of physicians who agree to participate to render second opinions; (3) under an alternative approach, Prudential has indicated that it will allow a lesser surgical benefit if the claimant has elective surgery without seeking a second opinion. We feel the insurance company should not penalize policyholders who choose to accept the evaluation of their physician and choose not to secure a second opinion. These objections were transmitted by staff to the Prudential Company. It was pointed out that all of the proposed second opinion programs would appear to increase rather than decrease the cost of medical care.

The study of IPAs, Foundations and HMOs referred to the Commission by the MSMA Council on June 3, 1978 was discussed. Dr. Heeb appointed a subcommittee consisting of Drs. Peterson, Braverman and Lottes to develop a full report and present it to the next Commission meeting.

The recent enforcement of a "hold harmless" clause by Kansas City Blue Shield was cited by the Commission as a further intrusion between the physician-patient relationship. It was pointed out that this essentially allows Blue Shield to establish a physician's fee without his consent or without any contract.

A resolution on this subject was submitted and adopted during the 1978 Interim Session.

An update of the Medicare activities was presented to the Commission. It was noted that an approximately 5% increase in physician fees was established on the Medicare computer in July. Physicians may now contact General American for their new profiles. Quite possibly, some surgical fees could be lower than those paid in FY 78. Physicians are urged to obtain their profiles and report any discrepancies as soon as possible.

MAX A. HEEB, *Chairman*
JAMES L. CARPENTER
RAE W. FROELICH
MARY K. MCCAFFREE
HERBERT C. WIEGAND
CHARLES H. COZEAN, JR.
JOHN A. GRIFFITH, JR.
L. M. MAGRUDER
ARTURO C. MONTES
F. ANTHONY THOMAS
R. PHILLIP ACUFF
A. E. BRAVERMAN
JOHN R. ESTHER
JAMES O. LOTTES
STANLEY S. PETERSON

REPORT OF COMMISSION ON MEDICAL-LEGAL AFFAIRS

The Conjoint Medical-Legal Committees of the Missouri State Medical Association, Missouri Association of Osteopathic Physicians and Surgeons and the Missouri Bar Association met on February 10, 1979, in Columbia, Missouri. The members included three representatives of the Missouri Bar, two representatives of MAOPS and six from MSMA. Staff from all three groups were also in attendance.

The group heard a presentation from Terry Allen, assistant attorney general, regarding proposed changes in the Professional Liability Review Board. All changes were received very favorably, except possible revisions to require a bond from plaintiffs and admission of review panel decisions as evidence into a subsequent trial. It was felt this would not be accepted by the Legislature or the courts.

Ron Kennedy, executive secretary of the Professional Liability Review Board (PLRB), gave a report on the progress of the activities of the panels. He reported that in 1977 there were 408 claims received; in 1978 there were 517 claims; and as of February 10, 1979, 60 claims had been received. Of the 590 claims disposed of thus far, 19.7% were withdrawn prior to hearing; 22.9% were resolved without a lawsuit; 56,3% resulted in a lawsuit being filed; and in 1.1%, the outcome was not determined. Of the 474 claims heard by the review panels, 16% found liability, 64% found no liability, 12% received a mixed recommendation and 8% did not receive a recommendation.

Mr. Kennedy indicated that they had recently added 50 lawyers to the list of lawyers. This was done to alleviate an often expressed complaint of lawyers who feel they are serving on panels much too frequently. He informed the Committee that the Board had recently received a very favorable audit for a new agency. In response to a question, Mr. Kennedy stated that members of the press seldom, if ever, attend the hearings of the review panels.

Fredrick Whittier, M.D., Columbia, then made a presentation on definition of death legislation. His main interest is from the viewpoint of organ retrieval.

It was reported that the compromise reached last legislative session was introduced this year as HB 438. In recent committee action, a substitute was approved. This is the only version acceptable to the House leadership.

Dr. George Wilson moved that the Committee endorse the House Committee Substitute for HB 438. The Bar asked that the attorneys, as a group, not be included in any endorsement because of the need to establish their position through their own mechanisms later this spring. The motion passed 10-0 with one person not voting.

Dr. Ash brought up the issue of a physician's ability to bring a lien against a patient. It was generally felt that the physicians should take action on their own to bring about this legislation.

Several problems concerning the professional code were discussed. It was felt that many problems had occurred because the code was not consulted. It was emphasized that the problems should be referred to the regional joint committees or to the appropriate state society for assistance. It was suggested that cohies of the code be provided to all physicians and attorneys.

Dr. George Wilson moved that the Committee endorse HB 88 which removes the residency requirement for professionals licensed to practice in the state. It was suggested that the language be amended to read ". . . licensed and practicing" in this state. The motion was seconded and passed as amended.

Charles J. Ash, *Chairman*
Bernard Draper
Earl P. Holt, Jr.
William J. Medlicott
Robert L. Willcoxon
Irving H. Clark
Joseph S. Cope
Vicente D. Deles
Jerome I. Simon
George P. Wilson
Richard O. Craig
George L. Hawkins, Jr.
William R. McPhee
Fred H. Thornton

REPORT OF COMMISSION ON PUBLIC AFFAIRS

In 1978, the Commission on Public Affairs sponsored a successful "Public Relations Workshop" on October 7-8 at Tan-Tar-A, Lake of the Ozarks.

Thirty-four physicians and auxiliary members attended the conference and heard presentations from the following speakers: Edward Annis, M.D., past-president of the AMA; Barbara Chapman, associate director of the AMA Office of Public Relations; Roy Pfautch, president of Civic Service; Inc.; and Bob Priddy, director of Missouri Network.

The Commission on Public Affairs met just prior to the workshop. At this meeting, the Commission voted to submit a resolution on medical student participation at the MSMA Annual and Interim Sessions. The House of Delegates considered and adopted the Commission's resolution at the Interim Session in Cape Girardeau.

A special meeting of the Commission was called on Sunday, October 8, to discuss the public relations program. Results of the public opinion survey conducted in spring 1978 and Roy Pfautch's suggestions for a pilot public relations program were discussed. The Commission voted to approve Mr. Pfautch's program in principle, while acknowledging that the program is being implemented in increments. To date, the following public relations projects have been implemented: (1) Three public service announcements have been purchased and distributed to television stations in Missouri; (2) a medical messages column is being sent semimonthly to all newspapers in the state; and (3) a program arranging public service interviews with physicians on radio and television is underway. At the meeting, the Commission also voted to sponsor an advanced public relations seminar in spring 1979.

Byron E. Watts, *Chairman*
A. J. Campbell
Sharon Waggoner
Ronald A. Youmans
Jean A. Chapman
Richard H. Loeb
Donald R. Germann
George Q. Dunmire
Jill M. Clayton
John M. Laird
B. A. Moranville
Armand E. Brodeur
Daniel M. Fraser
Vernon H. Balster
Robert F. Tobin

Changes in the MSMA Constitution

The following constitutional amendments were proposed at the 1978 MSMA Interim Session and were approved by the Committee on Constitution and Bylaws.

In accordance with the Constitution, these changes were sent to each component medical society at least two months prior to this meeting and have been published in the Journal of the Association.

Article V, Council

The Council shall be the executive body of this Association when the House of Delegates is not in session. It shall be the judicial body of the Association when matters are referred to it for decision by the Association, by component societies or by individual members thereof. It shall consist of the President, President-Elect, Immediate Past-President, Secretary, Treasurer and the duly elected Councilors from each Councilor District. A majority of the voting members of the Council shall constitute a quorum.

(Article V, Council *was unanimously adopted and the MSMA Constitution was so amended.)*

Article VII, Officers

Section 1. The Officers of this Association shall be a President, a President-Elect, three Vice-Presidents, a Secretary, a Treasurer, a Speaker and Vice-Speaker of the House of Delegates, and Councilors selected as provided.

Section 2. The Officers shall be elected annually. The terms of Councilors and Vice-Councilors shall be two years. Half of the membership of the Council shall be elected each year. The secretary and Treasurer shall be elected by the Council from the membership. The Delegates from each Councilor District shall meet prior to the last day of the Annual Session and elect the Councilors and Vice-Councilor from that District. In the event of death, resignation or removal of any Councilors, the Vice-Councilor shall automatically fill the vacancy. The Officers shall serve until their successors are elected and installed.

(Article VII, Officers *was unanimously adopted and the MSMA Constitution was so amended.)*

Resolutions

Resolution #1 — Councilor District Change

(Introduced by the MSMA Council)

Resolved, that the Jefferson County Medical Society joins the counties of Bollinger, Butler, Cape Girardeau, Carter, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, Ripley, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington and Wayne to constitute the Tenth Councilor District.

(Resolution #1 was adopted.)

Resolution #2 — House of Delegates Representation

(Introduced by the MSMA Council)

Resolved, that the formula providing for a delegate to be elected to the House "for each 25 full-paid members or fraction thereof in the Association on December 31, of the previous year, plus one additional delegate or alternate for each 100 members or major fraction thereof" continue to be used until such time as it can be properly re-evaluated.

(Resolution #2 was adopted. It is an amendment to the Bylaws approved by a two-thirds vote.)

Resolution #3 — Responsibilities of a Medical Witness

(Introduced by the Commission on Medical-Legal Affairs;
Charles J. Ash, M.D., Chairman)

(Refer to Resolution #7 for action on Resolution #3.)

Resolution #4 — Student Membership in the MSMA

(Introduced by the MSMA Council)

Resolved, that special student component societies be created at each of the four medical schools and that the student section be represented by eight delegates (2 from each medical school) to the House of Delegates at the Annual and Interim Sessions with full voting privileges, and be it further

Resolved, that the Constitution and Bylaws be revised to admit medical students as full members to the MSMA with all rights and privileges, and be it further

Resolved, that student members annual dues be $5 per year, and be it further

Resolved, that the MSMA student section be represented by a Student Councilor on the MSMA Council on an annual renewable basis with full privileges as a Councilor, and be it further

Resolved, that the MSMA pay reasonable expenses for each of the student delegates and the Student Councilor to the Annual and Interim Sessions.

(Resolution #4 was adopted as amended. As a proposed amendment to the Constitution and Bylaws, it will lay on the table until the 1979 Interim Session of the House of Delegates.)

Resolution #5 — Physician's Assistants

(Introduced by the Butler-Wayne-Ripley-Carter
County Medical Society)

Substitute Resolution #5

Resolved, that the Missouri State Medical Association be consistent in its policy of opposing state licensure or certification of additional health care personnel because there is no reason to accept a second class (second level) of medicine.

(Substitute Resolution #5 was adopted.)

Resolution #6 — Professional Liability Review Board

(Introduced by Rae W. Froelich, M.D.,
Mid-Missouri County Medical Society)

Substitute Resolution #6

Resolved, the Missouri State Medical Association proceeds with plans to draw up language in the form of a bill to be introduced in the 1980 Missouri General Assembly which would re-establish a Professional Liability Review Board, and be it further

Resolved, that the MSMA Council establishes the feasibility of a tem of voluntary Professional Liability Review Boards to review es until a new state statute is adopted and to report to MSMA at next Interim Session of the House of Delegates with a fiscal note ached.

(Substitute Resolution #6 was adopted.)

Resolution #7 — Expert Medical Witnesses and MSMA Membership

(Introduced by George L. Hawkins, M.D.,
St. Louis Metropolitan Medical Society)

Substitute Resolution #7

(Substitute Resolution #7 was proposed in lieu of solutions #3 and #7.)

Resolved, that testifying as a medical expert witness outside of the ecialty of the physician represents unethical conduct. In the fu-re, any physician who testifies as a medical expert witness outside his specialty or logical extension of their field of expertise, will be bject to expulsion after due process from the Missouri State Medi- Association, and be it further

Resolved, that any member of this Association who testifies as a dical expert witness without meeting the qualifications set forth this section, shall be subject to expulsion after a due process aring as set forth. An expert witness must have basic educational d professional knowledge as a general foundation for his testimony d in addition, have current personal experience and practical niliarity with the problems being considered and be actively en-ged in the practice of the medical subject under discussion, and be further

Resolved, nothing in the above is to be construed as preventing attending physician from testifying on the merits of the case.

(Substitute Resolution #7 was adopted.)

esolution #8 — Liens by Physicians Upon Physician Services

(Introduced by the Commission on Medical-Legal Affairs.)

Resolved, that the Missouri State Medical Association undertakes gislative efforts to establish similar lien processes for physicians d oral surgeons.

(Resolution #8 was not adopted.)

esolution #9 — Practice of Medicine by Unlicensed Persons

(Introduced by Louis P. Hetlage, M. D.,
St. Charles-Lincoln County Medical Society)

Resolved, that the House of Delegates of MSMA reaffirms its sition that the practice of medicine, the diagnosis of illness and the ndering of definitive medical care to an individual patient belongs ghtfully to the individual licensed graduate of Schools of Medicine Osteopathy, and be it further

Resolved, that the Board of Healing Arts be appraised of this sition and be requested to prosecute any and all infringements on the practice of medicine which are clearly in violation of the edical practice act.

(Resolution #9 was adopted.)

Resolution #10 — Accreditation of Paramedical Personnel

(Introduced by Louis P. Hetlage, M.D.,
St. Charles-Lincoln County Medical Society)

Resolved, that the MSMA Council assists the Missouri General ssembly in an analysis of the need for the further licensure of ramedical personnel, and be it further

Resolved, that the MSMA enters this endeavor in a positive manner, disregarding previous prejudices, recognizing the need for control of these many new disciplines as a means of protection for the public welfare.

(It was voted to refer Resolution #10 to the MSMA Council.)

Resolution #11 — Proposed MSMA Committee on Care of the Aged

(Introduced by Louis P. Hetlage, M.D.,
St. Charles-Lincoln County Medical Society)

Substitute Resolution #11

Resolved, that the MSMA appoints a committee to be called the "Quality of Life Committee," such committee to be comprised of medical leaders in various areas of the state, and to take such action as it deems appropriate.

(Substitute Resolution #11 was adopted.)

Resolution #12 — Physicians Participation in Armed Services Reserve

(Introduced by Louis P. Hetlage, M.D.,
St. Charles-Lincoln County Medical Society)

Substitute Resolution #12

Resolved, that the Missouri State Medical Association through its delegates to the AMA conveys the recommendation to the Department of Defense that further steps be taken to attract physicians to serve in the Armed Forces Reserve. To implement this, we further recommend that physicians be utilized according to their capabilities and training and compensated appropriately for their time.

(Substitute Resolution #12 was adopted.)

Resolution #13 — Replacement of Industrial Water Pollution Within the State of Missouri

(Introduced by St. Louis Metropolitan Medical Society)

Resolved, that the Legislature of Missouri be petitioned to construct legislation requiring all waters used within the State of Missouri to be treated for pollution to a degree of potable purity before returning to the natural waterways of the state.

(Resolution #13 was not adopted.)

Resolution #14 — Recognition of Adjunctive Treatment Resources for the Rehabilitation of the Alcoholic and Support of the Family

(Introduced by the Alcoholism, Drug Abuse and Smoking
Committee, St. Louis Metropolitan Medical Society)

Resolved, that the MSMA encourages physician members to utilize the adjunctive treatment resources of Alcoholics Anonymous, Al-Anon, Ala-Teen and National Council on Alcoholism local affiliate in the treatment and management of alcoholic patients.

(Resolution #14 was adopted.)

Resolution #15 — Uniformity in Judicial Handling and Disposition of Alcohol-Related Convictions With the Emphasis on Rehabilitation of the Chronic Alcohol-Related Traffic Offender

(Introduced by the Alcoholism, Drug Abuse and Smoking
Committee, St. Louis Metropolitan Medical Society)

Resolved, that a statewide uniform policy be carried out by all levels of the Missoui Judiciary System with regard to alcohol related traffic offenders as follows·

1. One-time alcohol related abuse convictions result in probation which shall include an indepth alcohol education program for a minimum of six months; and
2. Chronic alcoholism as identified by medical evaluation with repeated alcohol related convictions shall at a presentencing hearing be placed into an approved alcohol rehabilitation program which must be successfully completed by the offender or referred to a fellowship program one of which is Alcoholics Anonymous; and be it further

Resolved, that Alcoholics Anonymous, as an example of an effective fellowship program, be recognized as a means of providing ongoing alcoholic rehabilitation for the chronic offender.

(Resolution #15 was referred to the MSMA Council.)

Resolution #16 — Cooperation Between Organized Medicine and Missouri State Organizations With Regard to Appropriate Alcohol and Drug Abuse Education

(Introduced by the Alcoholism, Drug Abuse and Smoking Committee, St. Louis Metropolitan Medical Society)

Resolved, that MSMA, in cooperation with Missouri Advisory Council on Alcoholism and Drug Abuse, recommends to the Missouri Department of Elementary and Secondary Education that a uniform policy be adopted regarding alcohol and drug abuse education; and be it further

Resolved, that in-depth education be provided to Driver Education classes regarding drug and alcohol abuse as related to traffic safety.

(Resolution #16 was adopted.)

Resolution #17 — Cooperation Between the Pharmacy Profession and Physicians to Increase Awareness of the Alcohol and Legally Prescribed Drug Abuse Problems

(Introduced by the Alcoholism, Drug Abuse and Smoking Committee, St. Louis Metropolitan Medical Society)

Substitute Resolution #17

Resolved, that the MSMA cooperates more closely with the pharmacists of Missouri in a public education program aimed at developing the awareness of the problem of abuse of legally prescribed drugs and alcohol; and be it further

Resolved, early in the professional education of physicians and pharmacists, their curricula should include courses in these areas and that there should be ongoing cooperation and communication between physicians and pharmacists in this area as they practice their respective professions.

(Substitute Resolution #17 was adopted.)

Resolution #18 — Endorsement of the Concept of an All American Medical Hall of Fame in St. Louis

(Introduced by J. Otto Lottes, M.D. and George Zografakis, M.D., St. Louis Metropolitan Medical Society)

Resolved, that the House of Delegates of the Missouri State Medical Association endorses the concept of an All American Medical Hall of Fame in St. Louis as a special service to the medical profession in general and, more especially, to the physicians of Missouri, and be it further

Resolved, that the President of the Missouri State Medical Association appoint a member or a committee to select three famous Missouri physicians from the past to join the selections from the other forty-nine states and the District of Columbia to form the nucleus for the initial members in the Hall of Fame, and be it further

Resolved, that the Delegates from Missouri to the American Medical Association House of Delegates takes a request for e dorsement of the concept to the July 1979 Annual Meeting of tl American Medical Association in Chicago.

(Resolution #18 was referred to the MSMA Cour cil.)

Resolution #19 — Amendment to the Bylaws — Chapter IV, Sections 1 and 2

(Introduced by Francis X. Lieb, M.D., St. Louis Metropolitan Medical Society)

Resolved, that the second sentence in Chapter IV, Section 1 of tl Bylaws beginning "The Committee on Nominations shall repo . . . " be deleted and that this be substituted with the followin "The Committee on Nominations shall determine that propose candidates for office are qualified and willing to serve and shall repo to the House of Delegates in the form of a ticket containing tl names of one or more members for each of the offices listed in Artic VII of the Constitution, which are to be filled at that Annual Sessio excepting the Secretary and Treasurer who are elected by the Cou cil," and be it further

Resolved, that the first two sentences of Chapter IV, Section 2 the Bylaws be deleted and that the following be substituted: "A elections shall be by written ballot." Further, that the third par graph of Chapter IV, Section 2 of the Bylaws be amended to rea "The Nominating Committee shall propose one *or more* candidat for each delegate position for a full two-year term, one *or mor* candidates for each alternate position for a full two-year term, an one *or more* names for each unexpired position." Further, delete th words: "Where there is no contest a majority vote without ballot sha elect."

(Resolution #19 was adopted.)

Resolution #20 — Constitutionality of Professiona Liability Review Board Authority

(Introduced by Harry C. Eggleston, M.D., St. Louis Metropolitan Society)

(Substitute Resolution #6 was introduced in lieu c Resolution #6 and Resolution #20. Substitute Resolu tion #6 was adopted.)

Resolution #21 — Review Awards for Punitive Damages in Missouri Medical Liability Cases

(Introduced by Harry Eggleston, M.D., St. Louis Metropolitan Medical Society)

Substitute Resolution #21

Resolved, that the MSMA is grievously alarmed by the ruling i the Smith vs. Courter case, and be it further

Resolved, that the House of Delegates requests the MSMA Coun cil to conduct research concerning awards for punitive damages i medical liability cases, and to report back to the House of Delegate during the next Interim Session.

(Substitute Resolution #21 was adopted.)

Resolution #22 — Good Samaritan Bill

(Introduced by Edwin J. Masters, M.D., SEMO County Medical Society)

Substitute Resolution #22

Resolved, that the MSMA urges the Missouri Senate to pass thi long overdue Good Samaritan Bill.

(Substitute Resolution #22 was adopted.)

esolution #23 — Division of Family Services Claim Form

(Introduced by Stanley S. Peterson, M.D.)

Resolved, that the Missouri State Medical Association, through its uncil, Commissions, and Committees, informs the Division of mily Services of the far-reaching implications on the Welfare ogram of the state of Missouri if this form is imposed upon the dical community because of the plethora of information de- nded on the form, voluminous detail of the form, and the fact that will cost more to prepare the form than the amount of money owed for an office visit.

(Resolution #23 was adopted.)

esolution #24 — Support for a Balance-the-Budget Amendment

(Introduced by Edwin J. Masters, M.D.,
SEMO County Medical Society)

Resolved, that the MSMA goes on record as urging our state eneral Assembly to join the almost 30 other states who have passed solutions similar to House Concurrent Resolution 3, *demanding* cal responsibility at the federal level by calling for a limited con- tutional convention for the purpose of making a balanced federal dget a requirement except in the case of a genuine emergency as clared by a 2/3 vote of both houses of Congress, in which the ovisions would be temporarily suspended; and be it further

Resolved, that copies of this entire resolution be given or mailed to Missouri Legislators, both state and national, in an attempt to stop r government from burying us under an avalanche of inflation, gulation and debt.

(Resolution #24 was adopted.)

Resolution #25 — Abortion

(Introduced by Robert J. Valko, M.D., St. Louis)

Resolved, that the Missouri State Medical Association takes a nd against abortions and encourages the American Medical As- ciation to take a stand against abortions and that this stand be made blic, and be it further

Resolved, that the Missouri State Medical Association and the nerican Medical Association request a Constitutional Convention adopt a Constitutional Amendment prohibiting abortions, and be finally

Resolved, that if this resolution is passed by the Missouri State edical Association, that it be sent to the two U. S. Senators from r state and all of the Missouri Representatives to Congress. If it is ssed by the American Medical Association, this resolution be sent all of the Senators in the Country and all of the representatives in e House of Representatives.

(Resolution #25 was not adopted.)

Resolution #26 — Continuing Medical Education Credits as a Requirement for Relincensure

(Introduced by Raymond O. Frederick, M.D.,
St. Louis Metropolitan Medical Society)

Resolved, that the MSMA recommends to the state board of ensure that beginning in 1985, 120 hours of AMA CME Category I crued credit hours per three-year period be required for relicen- re in the state of Missouri.

(Resolution #26 was not adopted.)

Resolution #27 — Reapportionment of the House of Delegates

(Introduced by Robert R. MacDonald, Jr., M.D.,
St. Louis Metropolitan Medical Society)

Resolved, that the Bylaws of the MSMA, Chapter III, Section 2, be changed to read: "Each component medical society shall be entitled to send each year, one delegate or one alternate delegate to the House of Delegates for the first full-paid members or fraction thereof in the Association on December 31 of the previous year. Component medical societies with more than 50 full-paid members in the Association on December 31 of the previous year, are entitled one additional delegate or alternate delegate for each 25 members over 50 members, or fraction thereof. All Past-Presidents of the Association, the Speaker, and the Vice-Speaker shall serve as Delegates-at-Large."

(Resolution #27 was referred to the MSMA Council.)

Resolution #28 — Missouri Council on Physical Fitness and Health

(Introduced by Bruce Stoliar, M.D.,
St. Louis Metropolitan Medical Society)

Substitute Resolution #28

Resolved, that the Missouri State Medical Association requests that the Governor consider the establishment of a Missouri Council on Physical Fitness and Health, and be it further

Resolved, that the Missouri State Medical Association encourages physician members to serve on the Council on Physical Fitness and Health.

(Substitute Resolution #28 was adopted.)

Resolution #29 — Implementation of Comprehensive School Health Curriculum for Missouri Elementary and Secondary Schools

(Introduced by Bruce Stoliar, M.D.,
St. Louis Metropolitan Medical Society)

Resolved, that AMA model legislation "To provide for the Establishment of a Comprehensive Health Education Program in the Elementary and Secondary Schools" be proposed to the 81st Missouri General Assembly as a means to implement such a curriculum, and be it further

Resolved, that the Missouri State Medical Association reaffirms to the Missouri General Assembly its willingness to support such legislation, and be it further

Resolved, that the Missouri State Medical Association participates with other allied health agencies in implementing a Comprehensive School Health Curriculum for Missouri Elementary and Secondary Schools."

(Resolution #29 was adopted.)

Resolution #30 — National Health Insurance

(Introduced by Robert J. Valko, M.D., St. Louis)

Resolved, that the Missouri State Medical Association and the American Medical Association take a stand against any form of National Health Insurance, and be it further

Resolved, that we remove from the public the opinion that the American Medical Association is condoning in any way National Health Insurance.

(Resolution #30 was not adopted.)

"Without your help . . . I simply would not have made it through medical school"

(The following letter was received from a physician who, as a student, received financial assistance from the Missouri State Medical Association members who have contributed to the Missouri State Medical Foundation. It is printed with his permission.)

Dear Doctor:

"Thank you very much for your thoughtful letter concerning receipt of my final payment on my medical student loan.

"I can well remember the feeling of destitution associated with being a reasonably good student but lacking funds with which to enroll for the next semester in medical school. Having always been, perhaps, more than adequately endowed with pride, it was a lesson in discipline and humility to go seeking financial assistance. However, the effort brought me in contact with some very nice people who really do a lot to keep one's faith in human nature alive.

"I sincerely appreciate the efforts which you and others put into the Missouri State Medical Foundation and all other student loan funds. You should feel a quiet heroism for the assistance you lend to needy students . . . without your help, I simply would not have made it through medical school."

The Missouri State Medical Foundation—MSMF—was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

Send a Check Today to MSMF!

MISSOURI STATE MEDICAL FOUNDATION

113 Madison St., Jefferson City, Missouri 65102

• SPONSORED BY THE MISSOURI STATE MEDICAL ASSOCIATION •

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 501(c)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

Missouri State Medical Foundation

Annual Meeting
Chase-Park Plaza Hotel, St. Louis
Friday, April 20, 1979

The annual meeting of the Missouri State Medical Foundation was called to order by Dr. Miles C. Whitener, M.D., vice-president. A quorum was declared present.

The minutes of the 1978 annual meeting, the activities report of the MSMF for 1978-1979, the auditor's report and the loan report were approved as published in MISSOURI MEDICINE.

Dr. Mary E. S. Case, chairman, presented the report of the Nominating Committee.

Dr. Robert H. Tanner, Jefferson City, was reelected to serve a five-year term as secretary-treasurer and Dr. Marvin Singleton of Joplin and Dr. Gary Dyer of St. Joseph were elected to the Board of Trustees for five-year terms.

The ex-officio member of the Board will be Dr. Andrew McCanse of Kansas City, president of the Missouri State Medical Association.

There being no new business, Dr. Whitener announced that a meeting of the MSMF Board of Trustees would immediately follow the annual meeting.

The meeting was adjourned.

Board of Trustees Meeting
Chase-Park Plaza Hotel, St. Louis
Friday, April 20, 1979

The meeting of the Board of Trustees of the Missouri State Medical Foundation was called to order by Miles C. Whitener, M.D., vice-president, immediately after the adjournment of the annual meeting.

On behalf of the Nominating Committee, Dr. Mary E. S. Case, chairman, presented the following slate of officers for one-year terms:

President — Max S. Franklin, M.D., St. Louis
Vice-President — Miles C. Whitener, M.D., St. Louis County
Secretary-Treasurer — Robert H. Tanner, Jefferson City
Assistant Secretary — Ron Ellison, MSMA Staff

The above officers were elected by acclamation.

After an extensive discussion of present interest rates being charged by the MSMF, it was decided to meet again to study the feasibility of restructuring the rates.

The meeting was adjourned.

In Memoriam

WHEREAS, *there have been 61 deaths among our members since the 1978 Annual Session, and*

WHEREAS, *each of these members is missed as an individual as well as for his contributions to the practice of medicine and to the Missouri State Medical Association, and*

WHEREAS, *the loss of each member is felt by all members, as well as his loved ones and close associates and the patients he has served with dedication and*

WHEREAS, *condolences in the form of the Memoriam Perpetuam have been sent to the immediate family of each deceased member, therefore, be it*

Resolved, *that the House of Delegates now pays personal tribute by standing for a moment of silence in memory of each of the 61 following members we have lost and whose names will be recorded in the minutes of this Annual Session.*

Wilson, Hugh M., St. Louis
Allen, William H., Nevada
Fischer, Erich, St. Louis
Toon, Thomas J., St. Louis
Lonsway, Maurice J., St. Louis
Allen, E. Warren, Carrollton
Mayfield, James L., Crystal City
Farney, Jacob P., Kansas City
Verda, Dominic J., St. Louis
Schwartz, Frederick O., Creve Coeur
Lowell, Paul, Kansas City
Westerman, Henry C., St. Louis
Rost, William B., St. Joseph
Rigdon, John D., Kennett
Mercado, Raul, Jr., St. Louis
Cooper, Maurice E., Columbia
Webb, Marion A., Clayton
Spoenemann, Walter H., St. Louis
Larsen, Kenneth V., St. Louis
Bozzo, Raymond J., Washington
McKinsey, John J., Springfield
Kerr, David N., St. Louis
Cain, Charles F., Caruthersville
Harms, Florian L., Salisbury
Senne, Herbert C., St. Joseph
Brennan, Raymond J., Chillicothe
Ferrara, John P., Chesterfield
Sciortino, Gaspare, St. Louis
Kamuran, Ozgoncu, Creve Coeur
Callman, George, St. Joseph
Cleary, Frank, St. Louis
Goodrich, Harold A., Webster Groves
Markel, Arthur D., Poplar Bluff
Pawol, Sylvester E., Bridgeton
Goldberg, Isadore E., Braymer
Jansen, Robert, Kansas City
Pasco, James J., Nevada
Wilcoxen, William B., Bowling Green
Grabske, Charles F., Independence
Ferguson, Luther J., St. Joseph
Hoover, Herbert L., Springfield
Bowdish, Palmer R., Marshall
Walters, John H., Columbia
Isbell, Charles H., Carthage
McLeod, John, Kansas City
Beatty, Arch J., Kansas City
Manganaro, Frank J., St. Louis
Maxey, Hugh W., Shelbina
Brust, Carl H., Shawnee Mission, Kan.
Mays, Frank G., Washington
Whiteman, John, Gallatin
Long, David S., Harrisonville
Henderlite, John W., St. Louis
Hampton, Henry E., St. Louis
Walters, John H., Columbia
Kirstein, Melvin B., St. Louis
Hutto, A. Herman, St. Louis
Hunt, John W., Jr., Farmington
Stacy, Winton T., St. Joseph
Sneid, Philip, Kansas City
Jacob, Walter P., Kansas City

A reminder

ZYLOPRIM

(allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

INDICATIONS AND USE: This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim® (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy:
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

CONTRAINDICATIONS: Use in children with the exception of those with hyperuricemia secondary to malignancy The drug should not be employed in nursing mothers.

Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.

WARNINGS: ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy, particularly in patients with pre-existing liver disease.

Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis

In patients receiving Purinethol® (mercaptopurine) or Imuran® (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

Usage in Pregnancy and Women of Childbearing Age: Zyloprim® (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

PRECAUTIONS: Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or subnormal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

ADVERSE REACTIONS:

Dermatologic: Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.
Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.
A few cases of alopecia with and without accompanying dermatitis have been reported.
In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

Gastrointestinal: Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

Vascular: There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angiitis which have led to irreversible hepatotoxicity and death.

Hematopoietic: Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim® (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

Neurologic: There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

Ophthalmic: There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

Drug Idiosyncrasy: Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

OVERDOSAGE: Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

HOW SUPPLIED: 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

GUESS WHO . . . .

HAS NEVER INCREASED RATES FOR
Medical Malpractice Insurance?

Medical Defense Associates, Ltd.

IN FACT . . .
We Lowered Them!

for information on our Low Rates
Call Toll Free 1-800-492-7212
or locally 883-0199

Medical Defense Associates, Ltd.
Suite 117 B 1031 E. Battlefield
Springfield, MO 65807

REGISTRATION OF THE 121ST ANNUAL SESSION

First Councilor District — 27

Bauman, Henry C., Maryville
Bowles, R. P., Liberty
Byland, B. F., Maryville
Cooper, Barry, North Kansas City
Craig, Richard, St. Joseph
Dyer, Gary A., St. Joseph
Fakhoury, Donald, Kansas City
Harr, Patrick, Maryville
Hedges, Richard, North Kansas City
Herman, Allen I., St. Joseph
Kuenzi, D. E., Kansas City
McDonald, Wallace, St. Joseph
McElroy, Mike, Kansas City
McPhee, Wm. R., Kansas City
Martin, John, St. Joseph
Moen, B. H., St. Joseph
Ness, C. K., St. Joseph
Petersen, H. E., St. Joseph
Redmond, William S., St. Joseph
Rosenthal, Irwin I., St. Joseph
Schertz, T. B., North Kansas City
Soper, Wm. D., Liberty
Thomas, Fred A., Kansas City
Tobin, Robert F., St. Joseph
Wadlow, Earnest E., St. Joseph
Waggoner, S. E., St. Joseph
Williams, Robert D., Kansas City

Second Councilor District — 13

Barnett, F. A., Paris
Bukstein, Michael J., Hannibal
Cohrs, Clarence C., Moberly
Collins, Gretchen D., Macon
Dixon, John R., Brookfield
Eggleston, Donald E., Macon
Kruse, Carl R., Palmyra
Palmer, Russell H., Palmyra
Plowman, Edward M., Hannibal
Roller, James A., Hannibal
Stuerman, L. G., Louisiana
Tompson, Robert V., Moberly
Walterscheid, J. H., Hannibal

Third Councilor District — 354

Acker, H. L., Clayton
Adler, Benard, St. Louis
Aff-Drum, Helen, St. Louis
Ahadi, Abd, St. Louis
Alex, Morris, St. Louis
Allen, Wm. E., Jr., St. Louis
Almiron, Osias, Frontenac
Alvarez, Ulises, Ballwin
Amado-Ledo, David, St. Louis
Anglo, Luis, St. Louis
Anney, William G., St. Louis
Aronberg, Jerome, Clayton
Aronson, Abraham, St. Louis
Asghar, Mohammad, St. Louis
Ashby, Richard, St. Louis
Ayvazian, Vatche, St. Louis
Backer, M. H., St. Louis
Bailey, W. Harold, St. Louis
Balster, V. H., St. Louis
Banton, M. Roman, St. Louis
Banton, William C., St. Louis
Barragan, Hector, Ballwin
Becker, Robert, St. Louis
Benage, Clarence M., Florissant
Betgman, Hugo F., St. Louis
Berman, William, St. Louis
Berni, Anthony A., St. Louis
Berry, John W., St. Louis
Biddy, Ralph L., St. Louis
Binnington, H. B., Creve Coeur
Block, Arnold S., St. Louis
Bohigian, George, St. Louis
Boldizar, A. G., St. Louis
Boles, C. Read, Clayton
Bolinske, Robert E., St. Louis
Bolton, Robert, St. Louis
Bond, Leslie F., St. Louis
Bowerman, Harold H., St. Louis
Bradley, Richard V., St. Louis
Brand, Earl, Webster Groves
Brennan, Daniel J., St. Louis
Brody, Arnold, St. Louis
Brookes, Robert D., St. Louis
Brown, Seymour, St. Louis
Bruns, Kenneth, St. Louis
Burmeister, R. W., St. Louis
Burnstein, Robert, St. Louis
Busch, Anthony K., Belleville, Ill.
Cabonce, Augusto, Florissant
Caciolo, Carlo, St. Louis
Callaghan, Gerard, St. Louis
Callahan, Donald E., St. Louis
Carmona, G. V., Arnold
Casey, E. J., St. Louis
Castro, Juan M., St. Louis
Chadaratana, Phadung, St. Louis
Chishti, M. Ishaq, Chesterfield
Clayton, Jill M., St. Louis
Cole, Harry O., St. Louis
Colosi, Nicholas J., St. Louis
Conrad, Marshall B., St. Louis
Cooper, T. J., St. Louis
Coronado, Mario A., St. Louis
Corrigan, Gilbert E., St. Louis
Corvalan, J. C., St. Louis
Costello, Cyril, St. Louis
Costrino, J. A., St. Louis
Criscione, J. R., St. Louis
Criscione, James S., Kirkwood
Cunningham, E. J., St. Louis
Davidson, Morris, St. Louis
De Castro, Edwino T., St. Louis
Dehner, Jon, St. Louis
Deitchman, Robert B., Clayton
de Ungria, Pablo C., St. Louis
Devine, John B., St. Louis
Donaldson, Robert C., Ballwin
Dorton, Robert K., Clayton
Dowell, George H., Kirkwood
Drescher, Emmett B., St. Louis
Druck, Norman, Chesterfield
Dubuque, T. J., St. Louis
Duggan, John J., St. Louis
Dzundzev, Penco T., St. Louis
Edwards, James E., St. Louis
Egan, Thomas F., St. Louis
Eggleston, Harry, St. Louis
Ehrlich, Carl, St. Louis
Estrada, Corazon, St. Louis
Estrada, Jesus I., St. Louis
Evens, Ronald, St. Louis
Fabito, Daniel, St. Louis
Fallon, Richard H., St. Louis
Finnegan, J. V., St. Louis
Finkel, Barney W., Jennings
Fish, Richard G., St. Louis
Fisher, Linda A., St. Louis
Fleishman, Alfred, St. Louis
Fletes, James W., St. Louis
Floro, Mariano N., Florissant
Forsman, Waldo, St. Louis
Fox, Leon J., St. Louis
Fox, Robert E., St. Louis
Fraser, Daniel M., St. Louis
Frederick, R. O., St. Louis
Friedman, Paul L., St. Louis
Friedrich, Ernest R., St. Louis
Fries, Armand, St. Louis
Furla, Gus John, Brentwood
Furlow, L. T., Crystal River
Gagliardo, Joseph, Clayton
Galakatos, A. E., St. Louis
Gavini, Rajendra R., St. Louis
Gearhart, David L., Creve Coeur
Geise, August W., St. Louis
Gellman, Elliot F., Creve Coeur
Gerowin, Lance, St. Louis
Gilpin, Doris C., St. Louis
Giraparnont, Bang-Orn, St. Louis
Giraparnont, P., St. Louis
Gladney, John, St. Louis
Gold, J. A., St. Louis
Goldman, Melvin L., St. Louis
Goodman, Nathaniel, St. Louis
Grindon, J. B., St. Louis
Grundmann, William H., St. Louis
Gunn, Walter, St. Louis
Gursahani, Mohan, St. Louis
Hagen, Duane, St. Louis
Hall, Preston C., St. Louis
Hampton, Stanley F., St. Louis
Hanes, Lily Ann, Webster Groves
Hansel, French K., St. Louis
Hardy, David A. Clayton
Hardy, Guerdan, St. Louis
Harell, Alex, St. Louis
Hatfalvi, B. I., St. Louis
Hawk, Bray, St. Louis
Hawkins, George L., Webster Groves
Headrick, John A., St. Louis
Herjanic, M., St. Louis
Hershey, Falls B., St. Louis
Hironimus, John, St. Louis
Hofstatter, Leopold, St. Louis
Hogan, P. C., St. Louis
Holtz, Alan S., Kirkwood
Hollo, Vencel W., Clayton
Horne, Louis F., St. Louis
Hudgens, Richard, St. Louis
Huffaker, William H., St. Louis
Hughes, Robert G., St. Louis
Hutchinson, William B., St. Louis
Ishida, Yasuo, St. Louis
Izmirlian, G., St. Louis
Jacobs, Charles C., Furguson
Jacobs, Karl A., St. Louis
Jean, J. Ted, St. Louis
Johnson, C. J., St. Louis
Johnson, Mitchell D., Ferguson
Johnson, Tom, Jr., St. Louis
Jones, James D., II, St. Louis
Jones, James H., St. Louis
Jones, Otey S., St. Louis
Jotte, Richard F., St. Louis
Judd, Donald, St. Louis
Kabir, Mohammed A., St. Louis
Karandjeff, A. D., St. Louis
Kayes, Jack, St. Louis
Khan, A. R., St. Louis
King, E. E., Ferguson
Klippell, B. W., St. Louis
Knopf, Harry L., St. Louis
Knowles, R. R., St. Louis
Kohler, Louis H., St. Louis
Kopp, L. J., St. Louis
Korenblat, Phillip, St. Louis
Kowert, Edward H., St. Louis
Kuhlman, Robert E., St. Louis
Kuhn, Nobuko O., St. Louis
Kuttner, Marianne, University City
Laird, John M., Florissant
Larsen, Virginia L., St. Louis
Larson, Paul, St. Louis
Lawrence, George, St. Louis
Leach, Wilfred, St. Louis
LeBlanc, Leo, Clayton
L'Ecuyer, Jerome, St. Louis
Lepley, Charles, St. Louis
Lewin, W. H., St. Louis
Lewis, Robert D., St. Louis
Liang, Howard, St. Louis
Lichtenstein, Jack R., St. Louis
Lieb, Francis X., St. Louis
Liss, Jay L., St. Louis
Lottes, J. O., St. Louis
Lowenstein, Paul, St. Louis
Luedde, Philip S., St. Louis
McAdam, C. Rush, St. Louis
McAlister, Wm., St. Louis
Mackek, Otadar, St. Louis
MacDonald, Robert, St. Louis
Magness, Guy, University City
Maher, Thomas F., St. Louis
Maminta, Napoleon S., Chesterfie
Manansala, A. Q., St. Louis
Manes, Jose, Creve Coeur
Manion, Maria, St. Louis
Margolis, Richard, St. Louis
Max, Paul F., St. Louis
Medrano, C. A., St. Louis
Mehra, Subodh, St. Louis
Mell, Roger L., St. Louis
Mendelsohn, George E., St. Lou
Menendez, M., Ballwin
Meneses, Orlando, Des Perez
Merrims, Theodore, St. Louis
Meyer, Jay, St. Louis
Michael, V. E., St. Louis
Middleton, Jerry N., St. Louis
Mikhail, G., St. Louis
Miller, Charles, Kirkwood
Milster, Clyde R., St. Louis
Miskovsky, Emil F., Bridgeton
Molden, Charles, St. Louis
Monafo, Wm., St. Louis
Monat, Seymour, St. Louis
Montes, Arturo C., St. Louis
Moore, Alva, St. Louis
Moore, H. G., St. Louis
Moore, Harry G., Jr., St. Louis
Morris, Mary, St. Louis
Mueller, Robert, St. Louis
Mueller, Robert J., St. Louis
Mullarky, W. A., St. Ann
Nahm, Chung, St. Louis
Near, David M., St. Louis
Nemec, S. S., St. Louis
Newton, William T., St. Louis
Niedermeyer, George, Richmond Heights
Obermeyer, C. G., St. Louis
Ohlms, David L., St. Louis
Ohmoto, Masao, Clayton
O'Neal, L. W., St. Louis
Orenstein, Jos. M., St. Louis
Ott, Wm., St. Louis
Owens, William, St. Louis
Palazzo, Frank A., St. Louis
Paletta, F. X., St. Louis
Paletta, Theodore L., Creve Coeu
Pardo, Leopoldo, St. Louis
Park, Agatha L., St. Louis
Parwatikar, S. D., Chesterfield
Peskin, Edward, St. Louis
Peterson, Frederick D., St. Louis
Phipatanakuz, C., St. Louis
Phipatanakul, Supote, Kirkwood
Phillips, Hanford, St. Louis
Powell, John A., St. Louis
Probstein, J. G., St. Louis
Pruett, Burchard S., St. Louis
Quick, R., St. Louis
Rachlin, Maxwell, Clayton
Rao, S. N., St. Ann
Reese, A. V., Webster Groves
Reisler, David M., St. Louis
Rhee, S. E., St. Louis
Richards, Frank O., St. Louis
Riggio, Saluatore, St. Louis
Ring, Edward, St. Louis
Ritter, H. A., St. Louis
Roberts, John P., St. Louis
Rogers, H. Bryan, St. Louis
Roth, John J., St. Louis
Rubenstein, Melvin, Creve Coeur
Ruhling, Rudy, St. Louis
Rumelt, Michael, St. Louis
Saha, Sudha R., Ballwin
Salmon, Mickey L., St. Louis
Santillano, A. B., Ballwin
Sapala, Joseph C., St. Louis
Sauer, W. N., St. Louis
Schaefer, Glennon, St. Louis
Schaerer, J. P., St. Louis
Schlansky, Seymour, St. Louis

huessler, W., St. Louis
hulman, Jeff, St. Louis
hwartz, Mel, St. Louis
hwarz, Luis, St. Louis
iortino, John S., St. Louis
ott, Elwin P., St. Louis
ssions, Don, St. Louis
xton, Daniel L., Clayton
ah, Bharat, St. Louis
aw, Edward J., St. Louis
en, Jerome T. Y., St. Louis
erman, W. Gary, St. Louis
erwin, Charles S., St. Louis
ields, J. B., St. Louis
yken, Herman, Clayton
non, Jerome I., St. Louis
k, James C., Clayton
ith, Kenneth R., St. Louis
ith, Kevin B., Chesterfield
orya, Narendir T., St. Louis
ule, S. D., St. Louis
alding, Donald G., St. Louis
eno, Angelo A., Fenton
anley, Robert J., St. Louis
einberg, Franz, St. Louis
einer, A. J., St. Louis
ergen, Nick, St. Louis
okes, James, St. Louis
oliar, Bruce, Florissant
llivan, C. J., St. Louis
naka, George M., St. Louis
kwani, H. T., St. Louis
ss, Allen, Florissant
iel, J. Allen, St. Louis
oma, George E., St. Louis
Thurston, Don L., St. Louis
Tucker, George, St. Louis
Turner, Timothy, Creve Coeur
Twersky, Arthur, Florissant
Ulett, Pearl C., St. Louis
Ulett, George, St. Louis
Ungvari, Joseph C., St. Louis
Valach, Frank J., St. Louis
Valko, Robert, St. Louis
Velasco, Ernest T., St. Louis
Veluz, Benito, St. Louis
Viers, Wayne, St. Louis
Vighi, James R., St. Louis
Virant, John A., St. Louis
Vitale, N. S., St. Louis
Votaw, Robert E., St. Louis
Wacker, Leo L., St. Louis
Walker, Francis, St. Louis
Walz, Bruce, St. Louis
Warren, J. C., Clayton
Weber, S., Clayton
Westerman, Robert N., Chesterfield
West, Joseph W., Kirkwood
White, Newton, St. Louis
Whitener, Miles C., St. Louis
Whittico, James M., St. Louis
Wiant, James R., St. Louis
Wilkinson, David L., St. Louis
Williams, Carol F., St. Louis
Willman, Martin, St. Charles
Willman, V. L., St. Louis
Wissner, Seth, St. Louis
Wyatt, Lois C., Kirkwood
Xynos, Francisco P., St. Louis
Zografakis, G., St. Louis

Fourth Councilor District — 20

ker, Donald, Union
nney, Samuel C., Washington
rron, Joseph, Arnold
eles, Vicente, Crystal City
l Pizzo, Ferdinand, St. Charles
rrell, Sam, Washington
etlage, Louis P., Troy
dge, W. T., Crystal City
nsenmeyer, C., St. Charles
ggemeir, W. H., St. Charles
st, J. P., Washington
Rahman, Mohammad H., St. Charles
Richardson, W. R., Union
Roter, Alex, M., St. Charles
Rother, Paul H., St. Charles
Rutledge, John F., Crystal City
Sill, William F., St. Charles
Souey, John C., St. Charles
Stine, Wayne, Washington
Workman, George M., Hermann

Fifth Councilor District — 66

len, R. W., Columbia
len, William C., Columbia
pert, Martin, Columbia
nderson, T. R., Columbia
aker, A. Sherwood, Columbia
ourgeois, Curtis, Columbia
radshaw, W. D., Columbia
rown, Craig, Columbia
yland, S. J., Wellsville
hapel, James, Columbia
ooper, Charles W., Jefferson City
ope, James C., Rocheport
raig, H. W., Columbia
avis, David, Columbia
omke, H. R., New Bloomfield
urst, Henry, Fulton
ggers, George W. N., Columbia
kern, H. Peter, Mexico
xon, C. S., Jefferson City
arrell, Corinne, Columbia
otopoulos, C. K., Osage Beach
uchs, George J., Columbia
arner, Royal S., Jefferson City
arrett, Glen H., Columbia
iffen, Larry, Jefferson City
uhleman, Henry V., Jefferson City
eimburger, Richard, Columbia
ubbell, Ira, Columbia
urst, Daniel J., Columbia
ckson, Vernon B., Fulton
lly, Ben, Mexico
nes, Robert, Columbia
seph, Donald J., Columbia
Kardinal, Carl, Columbia
Kauffman, Ruth, Versailles
Lampton, Larry, Columbia
Leeper, Claude K., Columbia
Lobeck, Charles C., Columbia
McCaffree, Mary, Jefferson City
Matthews, John, Jefferson City
Mezoff, John M., Columbia
Millikan, Larry E., Columbia
Mitchell, Frank L., Columbia
Moranville, B. A., Columbia
Moseley, Otis, Osage Beach
Perry, Michael C., Columbia
Pulliam, Morris, Columbia
Ridenhour, Gene, Columbia
Russell, Garth S., Columbia
Schokker, J., Jefferson City
Simonds, John F., Columbia
Stabenow, David L., Columbia
Stauffer, Larry K., Jefferson City
Stephenson, Hugh E., Columbia
Stewart, W. B., Columbia
Stuart, Byron, Boonville
Su, Philo, Jefferson City
Summers, Joseph S., Jefferson City
Tanner, R. H., Jefferson City
Terry, Boyd E., Columbia
Thomas, Robert M., Columbia
Walters, Laura, Columbia
Washburn, J. Loren, Versailles
Weiss, James M. A., Columbia
Werth, Joe, Jefferson City
Wilson, George P., Columbia

Sixth Councilor District — 18

ampbell, Albert J., Sedalia
amron, O. H., Warrensburg
ischer, Theodore, Altenburg
lass, Robert L., Sedalia
Hansen, Arthur, Butler
Hughes, Shelby B., Clinton
Kelling, Jordan, Waverly
King, Richard H., Clinton
McCorkle, E. Lee, Marshall
Magruder, L. M., Nevada
Maxson, T. Reed, Warrensburg
Meyer, Jerry L., Concordia
Papreck, K. Thomas, Marshall
Pearse, Roy W., Nevada
Raynor, R., Marshall
Riley, Charles T., Richmond
Torontow, John, Nevada
Weltscheff, C. A., Windsor

Seventh Councilor District — 83

Anderson, Raymond B., Kansas City
Arbab, A., Kansas City
Arnold, John, Kansas City
Ashby, Jennifer, Kansas City
Asher, Arthur G., Lee Summit
Bailey, Hugh R., Kansas City
Barelli, Pat A., Kansas City
Barr, Glenn A., Kansas City
Bryan, W. H., Kansas City
Buchanan, Barbara, Kansas City
Calovich, Emery R., Kansas City
Campbell, John G., Kansas City
Case, William F., Kansas City
Chankler, R. A., Kansas City
Clark, Granville, Kansas City
Clark, I. H., Kansas City
Coleman, Robert L., Shawnee Mission, Kan.
Curts, Calvin J., Kansas City
Davidson, Kendrick C., Leawood, Kan.
Drowns, Bruce V., Kansas City
Engleman, Reinhold, Kansas City
Evans, Lawrence, Kansas City
Flynn, James, Kansas City
Forsythe, Robert, Kansas City
Fowler, Fred D., Kansas City
Goheen, John R., Kansas City
Goodson, Wm., Jr., Kansas City
Goolsbee, Robert, Kansas City
Griffith, John A., Kansas City
Gutek, E. Philip, Kansas City
Haight, J. Max, Kansas City
Hardy, J. W., Kansas City
Herman, E. M., Kansas City
Hickerson, William H., Independence
Hoadley, William D., Kansas City
Hughes, Michael, Kansas City
Hunkeler, John D., Kansas City
Husain, Syed Arshad, Columbia
Jacobs, Morton, Kansas City
Jonas, Harry S., Kansas City
Kerr, H. Harper, Kansas City
Latham, Ray, Kansas City
Layle, John, Kansas City
Lee, King Y., Kansas City
Linville, Howard E., Kansas City
McCanse, Andrew, Kansas City
McIntosh, Donald, Kansas City
MacGee, Edwin, Kansas City
Mangum, Wm. D., Kansas City
Medlicott, William J., Kansas City
Moore, Jack D., Kansas City
Moore, David B., Kansas City
Munyan, E. A., Kansas City
O'Malley, James F., Kansas City
Ozar, Milton B., Kansas City
Pierpergerdes, Larry G., Kansas City
Raich, Robert A., Kansas City
Rau, Jerold M., Kansas City
Reister, Dorothy D., Shawnee Mission, Kan.
Rice, Bernard F., Kansas City
Robinett, Wade V., Kansas City
Rodgers, Samuel U., Kansas City
Ross, Robert, Kansas City
Sauer, G. C., Kansas City
Schlozman, Daniel L., Kansas City
Schottman, G. W., Kansas City
Simon, Sanford, Shawnee Mission, Kan.
Spalding, W. B., Kansas City
Throne, Elias M., Kansas City
Tillema, David, Kansas City
Volk, G. E., Leawood, Kan.
Waeckerle, Joseph F., Kansas City
Weir, Robert K., Kansas City
Wheeler, Charles B., Kansas City
Whitaker, James H., Kansas City
Winkelman, Esther, Kansas City
Wise, George W., Kansas City
Wise, Morris F., Kansas City
Wurster, W. Joel, Kansas City
Youll, Donald V., Kansas City
Youmans, R. A., Kansas City
Young, James E., Kansas City
Ziemianski, Matthew, Kansas City

Eighth Councilor District — 60

Anderson, Paul B., Neosho
Anthony, Dallas D., Springfield
Ash, C. J., Springfield
Barnhill, Floyd R., Springfield
Benson, Ronald G., Springfield
Bentlage, Charles H., Joplin
Berry, Paul T., Springfield
Blankenship, G. W., Neosho
Brown, Jim, Springfield
Butler, Charles F., Jr., Springfield
Christianson, C. S., Mt. Vernon
Clary, William F., Springfield
Corry, F. M., Springfield
Domann, Darrell D., Springfield
Gaston, Sam L., Joplin
German, W. A., Springfield
Glover, Kenneth, Mt. Vernon
Griffin, Evelyn, Buffalo
Griffin, O. A., Buffalo
Grim, Edward M., Joplin
Hall, David W., Springfield
Harrison, Stratton W., Springfield
H'Doubler, F. T., Springfield
H'Doubler, Peter B., Springfield
Hurst, Wilfred W., Joplin
Isaac, Anita M., Springfield
Ivy, H. B., Springfield
Johnson, W. B., II, Springfield
Key, James S., Springfield
Lockhart, Charles E., Springfield
Lorenc, Ernest, Springfield
Lurie, Hal, Springfield
McAlhany, H. J., Springfield
McCraw, Doyle, Bolivar
Macdonnell, T. M., Marshfield
Manalo, Gil B., Carthage
Menchetti, Don, Springfield
Moore, De Armond, Springfield
Olive, G. C., Neosho
Penninger, W. H., Springfield
Peterson, Stanley S., Springfield
Quinn, Paul S., Springfield
Roberts, Howard, Joplin
Roper, S. D., Ozark
Sauer, Paul E., Springfield
Schwartz, E. J., Springfield
Shelton, Wayne, Springfield
Simpson, Emerson L., Springfield
Singleton, Marvin, Joplin
Spalding, D. L., Springfield
Sullivan, Dant, Springfield
Thomasson, David, Springfield
Vensel, Lee H., Springfield
Walker, William M., Springfield
Whitlock, C. C., Springfield
Willcoxon, R. L., Joplin
Winsky, Arlen D., Springfield
Wolfe, James B., Springfield
Wood, George H., Carthage
Wooldridge, Wilfred E., Springfield

Ninth Councilor District — 15

Bartlett, Hugh C., Rolla
Bhati, Deo K., Salem
Choudhury, M. H., Mansfield
Cooper, Claude W., Thayer
Fowler, Marvin L., West Plains
Froelich, R. W., Lebanon

Grannemann, H. Neal, Rolla
Hasek, O. Martin, Mountain Grove
Lum, Don, Ft. Leonard Wood
Russell, Barbara, Rolla
Smith, C. Franklin, Willow Springs
Stricker, E. A., St. James
Tang, T. C., Salem
Wiench, Delane, Rolla
Wiles, Jack N., West Plains

Tenth Councilor District — 36

Appleberry, C. H., Rivermines
Boonyasai, Boonfu, Pilot Knob
Burford, E. K., Cape Girardeau
Camp, R., Poplar Bluff
Cancelada, Juan, Farmington
Canlas, E. M., Poplar Bluff
Carlson, E. C., Poplar Bluff
Chapman, Jean A., Cape Girardeau
Chen, I-Hsiung, St. Genevieve
Cozean, C. H., Cape Girardeau
Cundiff, Clay, Cape Girardeau
Farmer, Norma D., Farmington
Glenn, T. J., Cape Girardeau
Hansbrough, E. T., Poplar Bluff
Heeb, Max A., Sikeston
Hill, Ronald T., Dexter
Holcomb, John K., Cape Girardeau
Jung, J. Marshall, Cape Girardeau
Kandalaft, F. H., Dexter
Kasten, Melvin C., Cape Girardeau
Ladyman, George, Poplar Bluff
Limpiphiphatn, D., Perryville
Masters, Ed, Sikeston
Medrano, C. A., Perryville
Palenske, R. L., Hornersville
Pontillas, Job B., Perryville
Ramirez, Ricardo M., Poplar Bluff
Rapp, Harold B., Cape Girardeau
Riding, G. Ray, Cape Girardeau
Ritter, C. John, Cape Girardeau
Ritter, Raymond A., Sr., Cape Girardeau
Ruff, T. E., Poplar Bluff
Sargent, John P., Sikeston
Shoss, Milton, Cape Girardeau
Talbert, C. R., Cape Girardeau
Turner, Kirby L., Poplar Bluff

Guest Physicians — 66

Arnold, Terry G., Richmond, Va.
Azu, Charles C., St. Louis
Becker, Larry E., Albuquerque, N.M.
Behlmer, S. D., Columbia
Benton, B. F. Jack, Memphis, Tenn.
Bernards, W. C., Houston, Tex.
Boonyasai, Vatana, Pilot Knob
Cabaugh, West, Huntsville, Ala.
Campbell, Gilbert S., Little Rock, Ark.
Cathey, Robert H., Manhattan, Kan.
Clouse, James C., Clinton
Coleman, Michael L., St. Louis
Collins, John, Stanford, Calif.
Curtis, Jack, Columbia
Donegan, William L., Milwaukee, Wis.
Dougherty, R. J., Brewerton, N.Y.
Eckardt, Lisgar B., Hendersonville, N.C.
Eggerton, W. E., Meridian, Miss.
Ellis, Harry D., Santa Fe, N.M.
Fennewald, Skip, Columbia
Fisher, Bernard, Pittsburgh, Pa.
Fogel, Steven T., Kansas City
Gillespie, Wm., Louisville, Ky.
Goldstein, Bernard, St. Louis
Goodman, Kenneth V., Jr., St. Louis
Graves, Kathryn, Prairie Village, Kan.
Grimes, Elwyn M., Kansas City
Gunn, Victoria, Columbia
Hamory, Bruce H., Rocheport
Hanshaw, William J., Quincy, Ill.
Heymann, William C., St. Louis
Howell, Robert S., Louisville, Ky.
Hurd, Marvin M., West Des Moines, Iowa
Isern, Henery, Kansas City
Johnson, Johnny E., St. Louis
Kestenbaum, Thelda, Kansas Cit
Klerman, Gerald, Rockville, Md.
Klippel, Allen P., Omaha, Neb.
Levine, Clive, Columbia
Martin, David L., Anderson, In
Miller, Dennis W., Kansas City
Morgan, Edward B., St. Louis
Most, John A., Carlsbad, N.M.
O'Neil, George J., St. Louis
Ritter, Frank, Ann Arbor, Mich.
Rizzo, Adolfo E., St. Louis
Rodgers, Dorothy, Columbia
Rubin, Donald M., New York, N.
Shair, H. M., Quincy, Ill.
Simpson, Raymond L., Alton, Ill
Shillito, John, Boston, Mass.
Sowash, James J., Columbia
Stebbins, Theodore L., Quincy, I
Strauss, John S., Iowa City, Iowa
Thompson, H. Stanley, Iowa City Iowa
Turk, Margaret A., Columbus, O
Valentine, Martin, Baltimore, M
Vicik, Gary J., Belleville, Ill.
Waters, C. N., Salina, Kan.
Weigel, Arthur, Springfield
West, Dennis, Wilmette, Ill.
Westphal, Mark, Carbondale, Ill.
White, Carl, Iowa City, Iowa
Whitley, Douglas M., Overland Park, Kan.
Yen, S., San Diego, Calif.
Zeiss, Ray, Chicago, Ill.

There were 692 members, 66 guest physicians, 169 exhibitors, 163 MSMA Auxiliary, 96 guests and 22 staff members. Total registration was 1,208.

WHY SHOULD A PHYSICIAN BE CONCERNED ABOUT HOSPITAL MANAGEMENT?

Because we think it affects your patient's care.

Employee confidence in hospital management improves morale and attitude: two major prescriptions in the care your patients receive.

Shared Service Systems, a non-profit organization of over 90 health care institutions in the Midwest, can provide complete management for your facility including a highly trained administrator and back-up support if and when required.

At Shared Service Systems, our management philosophy is to provide effective modern management to your hospital so that your patients will continue to receive local, cost effective health services.

We thought you should know about us.

for more information contact

SHARED SERVICE SYSTEMS
1725 So. 20th Street
Omaha, Nebraska 68108
or Phone: (402) 346-9008

Business Overhead Expense Insurance
Pharmacy
AUTERVILLE AVENUE
Date

sure-fire cure.

our office overhead expenses continue on
hen you are disabled and income production
tops. Continuing salaries, rent, professional
ervices, utilities, insurance, and taxes can
ake your accounts receivable income vanish
uickly.

he best prescription is **Overhead Expense**
isability Insurance which will help pay those
ontinuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

dministered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

ames

Fred S. James & Co. of Missouri, Inc.

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 6310
(314) 421-1838

121ST ANNUAL SESSION EXHIBITORS

Abbott Laboratories, North Chicago, Ill.
C. W. Alban and Company, Inc., St. Louis
American Medical Facilities Corporation, Maryland Heights
Ayerst Laboratories, New York, N. Y.
Biomedical Reference Laboratories, Inc., Burlington, N. C.
Bio-Science Laboratories, St. Louis
Blue Shield, St. Louis-Kansas City, St. Louis
Bristol Laboratories, Syracuse, N. Y.
Data Service Agency, St. Louis
Encyclopaedia Britannica, Chicago, Ill.
Fred S. James & Company of Missouri, Inc., Kansas City
General Data Systems, St. Louis
General Medical Corporation, St. Louis
Hankins Surgical Supply Company, Springfield
Investment Management & Research, St. Louis
Johnson & Johnson, Dermatological Division, Brunswick, N. J.
Johnston's, Inc., Shawnee, Kan.
The Key Company, St. Louis
Kremers-Urban Company, Milwaukee, Wis.
Lemmon Pharmacal Company, Sellersville, Pa.
McNeil Laboratories, Ft. Washington, Pa.
Medical Defense Associates, Ltd., Springfield
The Medical Protective Company, Fort Wayne, Ind.
Medserco Incorporated, St. Louis
Meyer Laboratories, Fort Lauderdale, Fla.
Milliken Communications Corporation, St. Louis
Missouri Medical Insurance Company, St. Louis
Mutual Association for Professional Services, St. Louis
Organon Pharmaceuticals, West Orange, N. J.
Pfizer Laboratories, New York, N. Y.
Pieroth Brothers, Inc., Des Plaines, Ill.
Rowell Laboratories, Inc., Baudette, Minn.
Searle Laboratories, Chicago, Ill.
Seiler Instrument & Manufacturing Company, Inc., S
Louis
Smith Kline & French Laboratories, Philadelphia, Pa.
Social Security Administration, Disability Insurance R
gional Office, Kansas City
Stuart Pharmaceuticals, Wilmington, Del.
Syntex Laboratories, Inc., Palo Alto, Calif.
Tab Products Company, St. Louis
United Medical Equipment Company, Kansas City
United States Air Force, St. Louis
Wallace Laboratories, Cranbury, N. J.
Wyeth Laboratories, Philadelphia, Pa.

In lieu of exhibits, the following firms made cash donations to assist in the sponsorship of the Scientific Sessions:

Ciba-Geigy Corporation, Summit, N. J.
Eli Lilly and Company, Indianapolis, Ind.
Geigy Pharmaceuticals, Ardsley, N. Y.
Mead Johnson and Company, Evansville, Ind.
Merck Sharp & Dohme, West Point, Pa.
Parke Davis Company, Morris Plains, N. J.
A. H. Robins Company, Richmond, Va.

SERVING YOU IN MISSOURI

MUNNS
MEDICAL
SUPPLY

9202 Barton, Overland Park, Ks. 66214
913-492-5820

Future of Medical Profession Lies in Medical Students of Today

In 1978, the MSMA House of Delegates took te first step to encourage more participation of edical students in the activities of the Missouri ate Medical Association. The House voted to set a fund to sponsor the attendance of students at sociation meetings.

The next step is up to MSMA members. Con- butions are needed if students are to be able to end MSMA annual sessions and acquire their st taste of organized medicine.

The Missouri Academy of Family Physicians s for many years conducted a successful pro- am of student participation in its meetings, pported by voluntary contributions from ademy members.

There are more than 2,000 students in Mis- uri's medical schools. At the 1979 MSMA An- al Session, money was available to sponsor only nine of these 2,000 students.

All donations are welcome. If every member of the MSMA will contribute just a few dollars to the fund, any medical student who wants to find out what organized medicine is all about can attend MSMA House of Delegates meetings, scientific sessions and the Annual Banquet.

The sooner these students become aware of what the MSMA does, the sooner they will be interested in becoming a part of organized medicine.

The enthusiasm and fresh viewpoints of today's medical students can only strengthen the medical profession of tomorrow.

MSMA Student Fund
P.O. Box 1028
Jefferson City, MO 65102

★
Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
Since 1899
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Borgmann and Philip E. Moppert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
Suite 202-A, 6600 W. 95th Street, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

MEDICAL EQUIPMENT SERVICE

- factory authorized and trained service men
- repairs or adjustments in office
- loaners available for most major equipment
- midwest's most complete sales and service center

G-N

The GOETZE-NIEMER Co.

Kansas City	816-231-1900
St. Joseph	816-279-0804
Joplin	417-624-1040
Springfield	417-865-6511

serving the midwest since 1884

New Members

Samuel E. Aparicio, M.D., St. Joseph Stat Hospital, St. Joseph 64506, has become member of Buchanan County Medical Society Dr. Aparicio is a native of Colombia, South America, received his preliminary education a National University in Bogota, Colombia and hi M.D. degree at the University of Colombia in 1945. He specializes in obstetrics and gynecology

John Laing Barton, M.D., 1820 Scott's Lane Cape Girardeau 63701, has become a member o Cape Girardeau County Medical Society. Dr Barton is a native of Nottingham, England, received his preliminary education at the University of Leeds and his M.D. degree at the University of Leeds in 1961. He specializes in psychiatry

Robert Urban Bennett, M.D., 1550 E. Sunshine, Springfield 65894, has become a membe of Greene County Medical Society. Dr. Bennet is a native of Springfield, received his preliminary education at the University of Kansas and hi M.D. degree at Drury College in 1969. He specializes in orthopedic surgery.

Ross R. Black, II, M.D., 1740 W. 92nd, Kansas City 64114, has become a member of Jackson County Medical Society. Dr. Black is a native o Cleveland, Ohio, received his preliminary education at Muskingum College and his M.D. degree at Ohio State University in 1973. He specializes in family practice.

Alan Lee Braun, M.D., 1709 Industrial Ave. Jefferson City 65101, has become a member o Cole County Medical Society. Dr. Braun is a native of Kansas City, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1976 He specializes in internal medicine.

Edwin Dean Breshears, M.D., 820 Jefferson. Fulton 65251, has become a member of Callaway County Medical Society. Dr. Breshears is a native of Warsaw, Mo., received his preliminary education at the University of Missouri-Columbia and his M.D. degree at University of Missouri-Columbia in 1975. He specializes in family practice.

James Erle Bright, M.D., 1900 S. National. Springfield 65804, has become a member o Greene County Medical Society. Dr. Bright is a native of Milan, Tenn., received his preliminary

ucation at the University of New Orleans and
s M.D. degree at Louisiana State University in
75. He specializes in psychiatry.

Yvonne C. Bussmann, M.D., Smith-Glynn-
llaway Clinic, 1211 S. Glenstone, Springfield
804, has become a member of Greene County
edical Society. Dr. Bussmann is a native of
essel, Kan., received her preliminary educa-
n at Tabor College and her M.D. degree at
ashington University in 1973. She specializes in
diatrics.

Jackie J. Curtis, M.D., 807 Stadium Blvd.,
olumbia 65212, has become a member of Boone
ounty Medical Society. Dr. Curtis is a native of
nnessee, received his preliminary education at
ast Tennessee State University and his M.D.
egree at the University of Tennessee in 1967.
e specializes in cardiothoracic surgery.

Larry E. Farris, M.D., 1980 N. Westwood,
oplar Bluff 63901, has become a member of
utler-Wayne-Ripley-Carter County Medical
ociety. Dr. Farris is a native of Acton, Tenn.,
ceived his preliminary education at Henderson
ate University and his M.D. degree at the Uni-
rsity of Arkansas in 1958. He specializes in
nical pathology.

J. Russell Felker, M.D., 3238 Lakewood,
ape Girardeau 63701, has become a member of
ape Girardeau County Medical Society. Dr.
elker is a native of Cape Girardeau, received his
eliminary education at Westminster College
d his M.D. degree at the University of
issouri-Columbia in 1973. He specializes in
ology.

Victoria Gunn, M.D., Dept. of Dermatology,
niversity of Missouri Medical Center, Columbia
212, has become a member of Cole County
edical Society. Dr. Gunn in a native of St.
ouis, received her preliminary education at
illiam Woods College and her M.D. degree at
e University of Missouri in 1975. She spe-
alizes in dermatology.

Larry Wayne Halverson, M.D., 500-A Porter
ve., Aurora 65605, has become a member of
zarks County Medical Society. Dr. Halverson is
native of Montana, received his preliminary
lucation at the University of Montana and his
.D. degree at the University of Oklahoma in
74. He specializes in family practice.

Jung Hee Han, M.D., E. 5th, Fulton 65251,
s become a member of Callaway County Medical Society. Dr. Han is a native of Kyung Sang, Korea, received her preliminary education at Korea University and her M.D. degree at Korea University in 1972. She specializes in psychiatry.

Thomas S. Harvey, M.D., 540 Main, Weston 64098, has become a member of Clay County Medical Association. Dr. Harvey is a native of Louisville, Ky., received his preliminary education at Yale University and his M.D. degree at Yale University in 1941. He specializes in general practice.

Gregory F. Janeczko, M.D., 229 Professional Bldg., Springfield 65806, has become a member of Greene County Medical Society. Dr. Janeczko is a native of Chicago, Ill., received his preliminary education at Loyola University and his M.D. degree at Loyola University Stritch in 1971. He specializes in anesthesiology.

Steven T. Joyce, M.D., 4320 Wornall Rd., 610 Medical Plaza, Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Joyce is a native of Garden City, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1973. He specializes in orthopedic surgery.

David C. Mechlin, M.D., 3205 Lansing Ave., Columbia 65201, has become a member of Boone County Medical Society. Dr. Mechlin is a native of Mexico, Mo., received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri in 1974. He specializes in otolaryngology.

John W. Meyer, M.D., 1900 S. National, Springfield 65807, has become a member of Greene County Medical Society. Dr. Meyer is a native of Kansas City, received his preliminary education at the University of Illinois and his M.D. degree at the University of Illinois in 1973. He specializes in pediatrics.

Cedil E. Oakes, Jr., M.D., St. Mary's Health Center, 610 W. Elm, Jefferson City 65101, has become a member of Cole County Medical Society. Dr. Oakes is a native of Norman, Okla., received his preliminary education at the University of Oklahoma and his M.D. degree at the University of Tennessee in 1964. He specializes in emergency room medicine.

Humberto C. Parraga, M.D., 803 Stadium, Columbia 65201, has become a member of Boone County Medical Society. Dr. Parraga is a native of

Sucre, Bolivia, received his preliminary education at Jaime Zudanez, Boliva and his M.D. degree at San Francisco Xavior University in 1967. He specializes in child psychiatry.

Milton Hal Pearlman, M.D., University of Missouri Medical Center, Columbia 65212, has become a member of Boone County Medical Society. Dr. Pearlman is a native of Topeka, Kan., received his preliminary education at the University of Michigan and his M.D. degree at the University of Michigan in 1977. He specializes in otolaryngology.

Armando B. Ponce, M.D., Fulton State Hospital, Fulton 65251, has become a member of Callaway County Medical Society. Dr. Ponce is a native of Muntinlupa, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1971. He specializes in psychiatry.

David Ryan, M.D., 618 E. First, Trenton 64683, has become a member of Grand Rive County Medical Society. Dr. Ryan is a native c Trenton, received his preliminary education a the University of Missouri-Columbia and hi M.D. degree at the University of Missouri Columbia in 1969. He specializes in family practice.

Alvin Lee Sago, M.D., 1412 Lexington, Cap Girardeau 63701, has become a member of Cap Girardeau County Medical Society. Dr. Sago is native of Leadwood, received his preliminar education at Central Methodist College and hi M.D. degree at the University of Missour Columbia in 1970. He specializes in urology.

Paul D. Sander, M.D., 807 Stadium, Colum bia 65212, has become a member of Boon County Medical Society. Dr. Sander is a native Poplar Bluff, received his preliminary educatio at the University of Georgia and his M.D. degre at the University of Missouri-Columbia in 197 He specializes in anesthesiology.

In Memoriam

George Joseph Fuchs Sr., M.D., Rt. 2, Barnett 65011; a graduate of St. Louis University, 1921; member of St. Louis Metropolitan Medical Society; age 82; died May 7, 1979.

Martin P. Hunter, M.D., 637 E. 65th Terr., Kansas City 64131; a graduate of Washington University, 1934; member of Jackson County Medical Society; age 68; died May 11, 1979.

Grace Scholz Mountjoy, M.D., Mau De Villa Retirement Center, Manchester 63011; a graduate of the University of Missouri, 1906; member of St. Louis Metropolitan Medical Society; age 98; died May 11, 1979.

Lee George Potter, M.D., 12000 Wornall Kansas City 64145; a graduate of Washingto University, 1919; member of Jackson Count Medical Society; age 86; died May 14, 1979.

Charles W. Rose, M.D., 334 S. Van Brun Kansas City 64124; a graduate of the Kansas Un versity, 1918; member of Jackson County Medic Society; age 87; died June 6, 1979.

Michael Bernreiter, M.D., 1246 W. 63r Kansas City 64113; a graduate of Ludwig Maximillian University, Munich, 1922; membe of Jackson County Medical Society; age 83; die June 6, 1979.

For MSMA Impaired Physician Program Assistance,

Call 314-636-5744

24-Hour Telephone Answering Service. Calls Are Confidential.

Don't just
tell them
to quit...

Studies confirm that 9 out of 10 smokers know at smoking is a bad habit. And they'd like to uit. But they don't know how.

The large majority of smokers indicate they ould quit if their doctors told them to.

And studies confirm that a large proportion of atients have quit upon advice from their doctors.

However, about two thirds of smokers report at they've never received advice on quitting om their doctors. It could be their doctors don't ant to push them. Or maybe quitting is given a wer priority than other health problems.

But we believe a lot of doctors don't tell their atients to quit smoking for one simple reason: ey don't know how to answer the inevitable how."

The National Cancer Institute has developed a free "Helping Smokers Quit" kit to help you answer the "how" and to help your patients quit the smoking habit. Materials for this kit were pretested with the cooperation of the Harris County (Texas) Medical Society and M. D. Anderson Hospital and Tumor Institute in Houston, Texas.

The National Cancer Institute will provide the "Helping Smokers Quit" kit free of charge to all physicians who want to participate in this important effort. Included in the kit are guidelines for physicians, a self-test to help smoking patients determine why they smoke, pamphlets with tips on quitting, and waiting room posters to introduce the subject. Each kit contains enough materials to help 50 of your smoking patients who want to quit.

Show her how to quit.

on't delay! To receive the National ancer Institute's free "Helping mokers Quit" kit, fill out this order orm and return it today.

I don't want to just tell her to quit.
I want to show her how to quit.
Please send me my free "Helping Smokers Quit" kit today.

Name ______________________
Address ______________________
City ____________ State ________ Zip ______

Mail to "Helping Smokers Quit" Kit
Office of Cancer Communications
National Cancer Institute
Building 31, Room 4B39
Bethesda, MD 20014

INDEX TO ADVERTISERS

They Help Make MISSOURI MEDICINE *Possible*

Beltone Electronics 355
Burroughs Wellcome 394
CommuniCare 358
Goetz-Niemer Company 402
Fred S. James & Co. of Missouri, Inc. 399
Eli Lilly & Company 359
Mead Johnson Pharmaceutical Division . Insert (378-379)
Medical Defense Associates, Ltd. 395
Medical Protective Company 401
Merck Sharp & Dohme ....
Merrell-National Laboratories ..... 354, Insert (354-3
MOMEDICO ....
Munns Medical Supply ....
Roche Laboratories ..... 351, Insert (354-355), 407,
Shared Service Systems ....
Smith Kline & French .... Insert (354-3
The Upjohn Company .... Insert (354-3

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

VACATION HOME — Tan-Tar-A Estates, Lake Ozark, Mo. On golf course. 3 BR, 2½ Ba, A/C, fully equipped kitchen, W/D, Sleeps 12. Ideal large family or four couples. All sport facilities available. Seasonable rates. F. A. O'Connell, M.D., 7830 State Line, Shawnee Mission, Kan. 66208. (913) 381-0886.

FAMILY PRACTICE — Solo Board Certified family practitioner is seeking a family practice associate in growing community 6 miles north of Kansas City International Airport. Contact, Carl M. Myers, M.D., Platte Medical Clinic, Platte City, Mo. 64079. (816) 431-2200.

Physicians

The United States Air Force Medical Corps has immediate openings for primary care physicians. This is an opportunity to practice clinical medicine with 30 days of paid vacation each year. Ready for a change in lifestyle? Contact:

Capt. Steven DeWoody
(314) 263-0319

ST. LOUIS: EMERGENCY MEDICINE — Work availab
Monday-Friday days only; full time or part time; paid profe
sional liability; flexible schedule; Missouri license require
Call PPG's Laury Kamp at 314-878-2280.

WANTED — Immediate opening for House Physician nig
shift, 5 PM to 7 AM. Call Lutheran Medical Center, D
Stindel, (314) 772-1456, Station 462.

PLACE IN THE COUNTRY — Leisure time or investme
property, wooded or open farm land. 30 to 1,000 acres. W
have the land to suit you. We are in the country specializi
in Country Real Estate. Oakleigh Real Estate, Bellflowe
Mo. 63333. Phone (314) 929-3637.

WANTED: OLD X-RAY VIEW BOX — Write to H. Ne
Grannemann, M.D., 1000 West 10th, Rolla, Mo. 65401

WANTED — House Physician Medical Service 200-b
acute care general hospital. Must have Missouri licens
Five-day week, ten-hour day. Excellent salary. Compt
Hill Medical Center, 1755 S. Grand, St. Louis, Mo. 631
Phone (314) 771-0500.

CALL 314-636-5744 — For MSMA Impaired Physician A
sistance Program. 24-hour answering Service. Calls are co
fidential.

EMPLOYMENT OPPORTUNITIES — The Division of V
cational Rehabilitation — Department of Elementary a
Secondary Education, is accepting applications for medic
consultants to work in the Division central and district o
fices. Applicants must have a license to practice medicine
the state of Missouri. Consultants may be employed from tw
hours to 32 hours per week, as needed. Inquiries should b
directed to either William H. Keith, Assistant Commission
for Vocational Rehabilitation, 3523 North Ten Mile Driv
Jefferson City, Missouri 65101 — Telephone (314) 751-325
or Donald Fishback, Office of Administration, Division
Purchasing, State Capitol Building, Jefferson City, Missou
65102 — Telephone (314) 751-4204.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

ach tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

ust one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps liminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum elps eradicate recurrent UTI
- Low incidence of bacterial resistance in community ractice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

efore prescribing, please consult complete product informaon, a summary of which follows:

Indications and Usage: For the treatment of urinary tract nfections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus irabilis, Proteus vulgaris, Proteus morganii.* **It is recommended hat initial episodes of uncomplicated urinary tract infections e treated with a single effective antibacterial agent rather han the combination.** *Note:* The increasing frequency of resisant organisms limits the usefulness of all antibacterials, espeially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis arinii* pneumonitis. To date, this drug has been tested only in atients 9 months to 16 years of age who were immunosupressed by cancer therapy.

The recommended quantitative disc susceptibility method *Federal Register, 37:*20527-20529, 1972) may be used to estinate bacterial susceptibility to Bactrim. A laboratory report of 'Susceptible to trimethoprim-sulfamethoxazole" indicates an infecion likely to respond to Bactrim therapy. If infection is confined to he urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

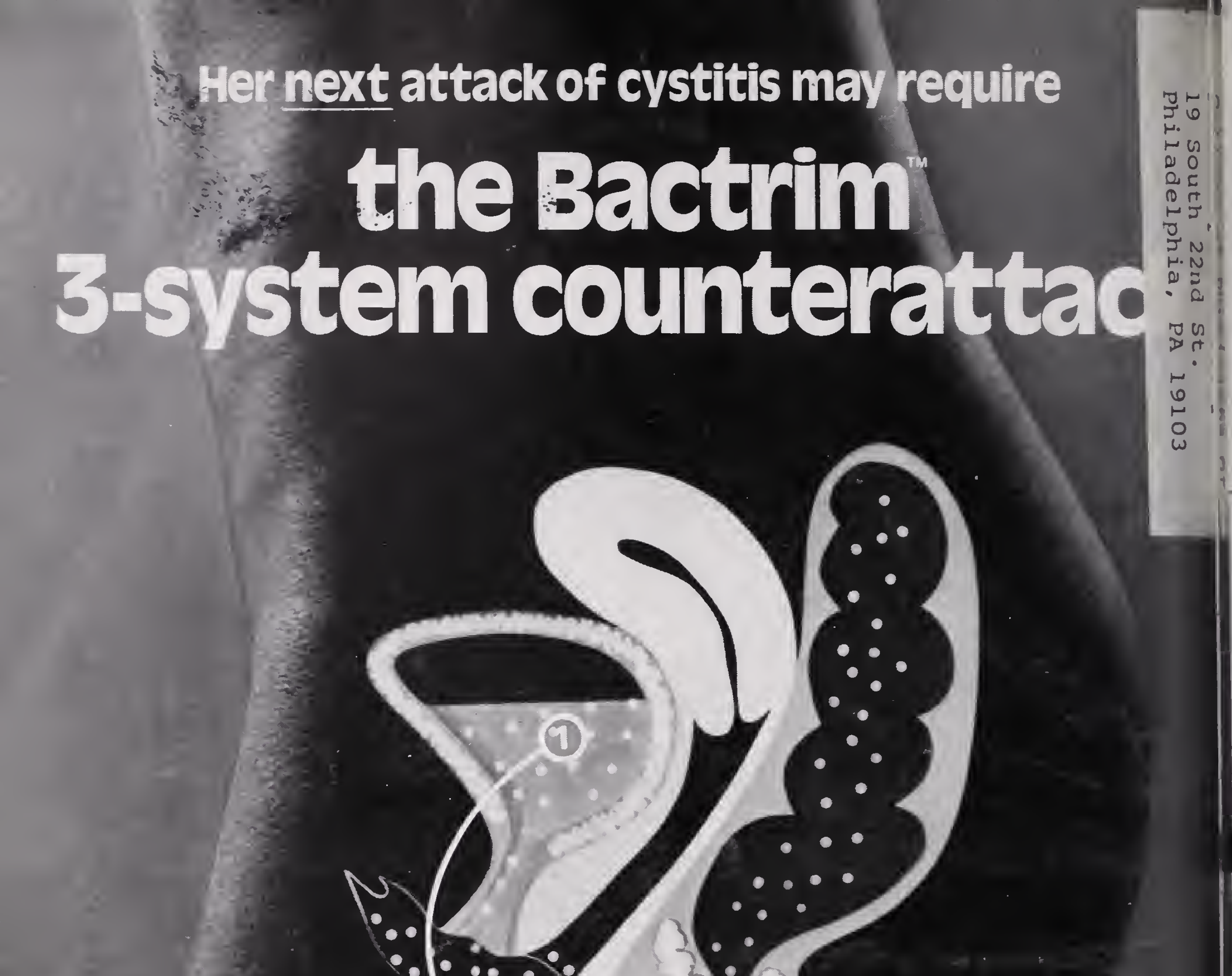
Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see back cover.

19 South 22nd St.
Philadelphia, PA 19103



Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Entero-bacteriaceae* in the bowel without the emergence of resis tant organisms. Thus, Bactrim reduces the risk of introit colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

Missouri Medicine

Vol. 76, No. 8 (ISSN 0026-6620) August, 1979

MDS

Current Concepts of Back Pain

Management of Obscure Causes of Benign Obstructive Jaundice

Perinephric Abscess

The University of Missouri Experience

MSMA NEWS ROUND-UP

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

SEP 4 1979

Current Concepts in Breast Cancer Management

Part IV

MISSOURI STATE MEDICAL ASSOCIATION

Contents • Page 413

Only one insurance company is backed by the Missouri State Medical Association. Momedico®. The better way.

Your present professional liability insurance probably covers you for everything you can think of. But think of what more your insurance company should do for you. Special needs you may have, lower premiums on your policy, service and assistance as well as coverage. And a voice in setting company policies and direction. That's why Momedico has a better way.

Doctors in the insurance business.

Today, more than 80,000 physicians in the United States carry professional liability protection through their own insurance companies. There are 19 such companies sponsored by state or local medical societies. More than 40 doctor-owned companies and trusts are either operational or on the drawing boards.

Formed by Missouri doctors, for Missouri doctors.

Here at home, physicians found adequate insurance protection lacking. And so, Momedico was formed by the Missouri State Medical Association. This stock insurance company is licensed and regulated the same as all other stock insurance companies in Missouri. In unity there is strength, and nowhere can you find more strength in your protection than in this doctor-directed company. All are fellow physicians.

Lower premiums. More flexible coverage.

Everyone promises low premiums. Momedico delivers on that promise because our operating expenses are lower than commercial insurers. We don't have to pay stockholders who are interested in profit, not protection. We can design a policy to meet your needs, your practice. Our unique status directly benefits you. If the premiums we collect are more than is needed, they can be returned to you through a participating provision. One more benefit: you pay no deductible.

And still your money earns.

All insurance companies must establish substantial reserves. Momedico is no exception. It's what we do with the earnings on this money that makes Momedico a better way. The invested earnings accrue to your benefit, and every other doctor who is a member of the company. Commercial insurance companies retain these earnings for their benefit. Not Momedico.

The best defense is a good lawyer.

Nobody wants to end up in court. If you do, you'll be glad Momedico is behind you. We'll do everything proper and possible to protect your interests. We have retained the top-rated claims attorneys who work for some of the country's largest insurance companies. We'll also help provide the best expert witness assistance. By joining Momedico, you can help keep closer control of claims settlements. And you don't pay hidden legal fees.

Strong and growing.

All of our policy contracts are backed by prominent American insurance companies that specialize in medical underwriting. The company is financially healthy, and structured to maintain that health along with growth. In the short time since Momedico was created by the Missouri State Medical Association, over six hundred physicians have become policyholders. And more join every day.

John N. Martin, M.D.
President, Missouri State Medical Assoc.

"As a fellow physician, and a policyholder of Momedico, I enthusiastically endorse this professional liability program. It has been designed by doctors, for doctors. I invite you to learn more about this protection from Momedico."

Mail this coupon today. Find out why Momedico and the Missouri State Medical Assoc. have a better way to protect you.

Yes, I would like to know more about professional liability insurance with Momedico.

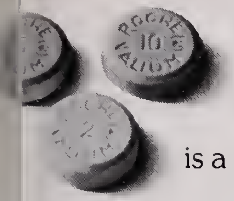
MOMEDICO®
Better Protection. Together.
Sponsored by the Missouri State Medical Association

☐ Have your agent call me. ☐ Send me more information, please.

NAME ________________
ADDRESS ________________
CITY/RFD ________________
ZIP ________ PHONE # ________

Mail to:
Momedico, 100 North Broadway, St. Louis, MO 63102 or call (314) 241-4774

A character all its own.



Valium (diazepam/Roche) is a benzodiazepine with a character all its own. Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® Ⓘⓥ
diazepam/Roche
2-mg, 5-mg, 10-mg scored tablets
a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.
Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).
Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Rae W. Froelich, M.D., Lebanon
George Bohigian, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
Richard H. Fallon, M.D., St. Louis
James M. Stokes, M.D., St. Louis
J. Otto Lottes, M.D., St. Louis
Theodore L. Paletta, M.D., St. Louis
Frederick D. Peterson, M.D., St. Louis
Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
Vice-Councilor, Paul H. Rother, M.D., St. Charles
5th District, H. Peter Ekern, M.D., Mexico
Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
Donald McIntosh, M.D., Kansas City
Ronald A. Youmans, M.D., Kansas City
Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
Marvin A. Singleton, M.D., Joplin
Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Information for Contributors

Articles are accepted for publication on condition th
they are contributed solely to this journal. Material a
pearing in MISSOURI MEDICINE is protected b
copyright.

Manuscripts should be submitted to the editor, Wilfr
E. Wooldridge, M.D., P.O. Box 1028, 113 Madiso
Jefferson City, Mo. 65102. The transmittal letter shoul
designate one author as correspondent and include h
address and telephone number.

**In addition, in view of *The Copyright Revisio*
Act of 1976, effective Jan. 1, 1978, transmittal le
ters to the editor should contain the following la
guage: "In consideration of the Missouri Stat
Medical Association's taking action in reviewin
and editing my submission, the author(s) unde
signed hereby transfers, assigns or otherwise co
veys all copyright ownership to the MSMA in th
event that such work is published by the MSMA.
We regret that transmittal letters not containin
the foregoing language signed by *all* authors of th
submission will necessitate delay in review of th
manuscript.**

Manuscripts should be typewritten, double space
and the original with one carbon copy submitted. Reta
another carbon copy for proofreading. Used manuscrip
are not returned. School and hospital appointments of th
author should accompany the manuscript. It is desirab
that a synopsis-abstract of approximately 135 words a
company the manuscript.

References should be arranged at the end of the artic
in the order in which the references are cited in the tex
The reference should give name of author, title of articl
name of periodical, volume number, initial page numbe
and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings i
India ink on white paper. They should not be mounte
and name of author and figure number should be pencile
lightly on the backs. Legends should appear on a separat
sheet.

Legal difficulties may arise from unauthorized use
names, initials or photographs in which individuals can b
identified. Permission should be secured from patient o
legal guardian and signed duplicate or photostat submit
ted with such photographs or identification. The Edito
and Editorial Board assume no responsibility for th
opinions and claims expressed in articles contributed b
authors. If citation of an institution related to the article i
made, approval of the chief of service should be given in
letter accompanying the article.

Reprint order blanks will accompany proof, which wil
be sent to authors prior to publication.

All material other than scientific should be receive
prior to the first of the month preceding month of publica
tion.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

ontents for August, 1979

ientific Articles

rrent Concepts of Back Pain; John Gragnani, M.D. 421

ternal Iliac Artery Aneurysm: Unusual Cause of Lower Abdominal and Pelvic Symptoms, *Case Report;* David W. Victor, M.D., John D. Halverson, M.D. and Harvey R. Butcher, M.D. 424

anagement of Obscure Causes of Benign Obstructive Jaundice; N. Denny Crisp, M.D. and L. Beaty Pemberton, M.D. .. 427

rinephric Abscess: The University of Missouri Experience, *Case Report;* A. Philip DePauw, M.D., Joseph Montie, M.D. and Gilbert Ross, Jr., M.D. 429

rrent Concepts in Breast Cancer, *Part IV. Approach to the Patient With Advanced Disease;* Carl G. Kardinal, M.D. 432

ews and Features

SMA News Round-Up ..... Insert (414-415)

oto-Comment by James W. Clawson, M.D. 416

itor's Corner 417

Brief 418

esident's Message 441

SMA Auxiliary 443

iform Collection Service Approved for MSMA 445

ws From the Medical Schools 446

w Members 452

ntinuing Education Coming Events ... 453

Memoriam 454

dex to Advertisers 457

ssouri Medicine in Review 458

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D., Columbia
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
F. Thomas Ott, M.D., St. Louis
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

ALDOMET®
(METHYLDOPA | MSD)
TABLETS: 500 mg, 250 mg, and 125 mg
MSD
MERCK SHARP & DOHME
Copyright © 1979 by Merck & Co., Inc.

Tenuate® Ⓒ
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System.* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A

Licensor of Merrell®

References: 1. Citations available on request — Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

8-3921 (Y587A)

Overweight may not always be simple... complications can develop.*

Complicated or not...

Tenuate® Dospan® ⓒⅣ

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

In uncomplicated overweight.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

---

*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

Merrell

For prescribing information see opposite page.

new
600 mg tablets
Motrin®
ibuprofen, Upjohn

More convenient for some of your patients.

Now there are three Motrin tablet strengths to choose from-
600 mg, 400 mg, and 300 mg

Upjohn The Upjohn Company
Kalamazoo, Michigan 49001, U.S.A.

© 1979 The Upjohn Company

MSMA

NEWS
ROUND - UP

August, 1979

House to vote on constitutional changes

Changes in the MSMA Constitution will be voted on by delegates to the Interim Session, November 10-11, 1979. These changes would be required to implement the resolution regarding student membership in the MSMA as initially adopted by the House of Delegates at the 1979 Annual Session.

As stated in the Constitution, any constitutional change must be published prior to its submission to the House.

The first change amends **Article IV. House of Delegates** of the Constitution by deleting the second paragraph of that article.

Article V. Council would be changed as follows:

"The Council shall be the executive body of this Association when the House of Delegates is not in session. It shall be the judicial body of the Association when matters are referred to it for decision by the Association, by component societies or by individual members thereof. It shall consist of the President, President-Elect, Immediate Past-President, Secretary, Treasurer and the duly elected Councilors from each Councilor District, and a duly elected medical student Councilor. A majority of voting members of the Council shall constitute a quorum."

Article VII. Officers would read:

"Section 2. The officers shall be elected annually. The term of Councilors and Vice-Councilors shall be two years, except for the duly elected medical student Councilor who shall be elected for a one-year term. Half of the membership of the Council shall be elected each year. The Secretary and Treasurer shall be elected by the Council from the general membership. The delegates present from each Councilor District shall meet prior to the last day of the Annual Session and elect the Councilors and Vice-Councilor from that district. The Delegates from the medical school component societies shall meet prior to the last day of the Annual Session and elect a medical student Councilor and Vice-Councilor. In the event of death, resignation or removal of any Councilor, the Vice-Councilor shall automatically fill the vacancy. The officers shall serve until their successors are elected and installed."

This resolution would also require the following major revisions in the MSMA Bylaws.

In **Chapter I. Membership,** a fourth class of members would be added,

"STUDENT MEMBERS shall be limited to those members of component societies who are pursuing a course of study leading to the degree of Doctor of Medicine in a medical school approved by the American Medical Association and shall enjoy all of the privileges of active membership." Section 4 on Associate members would be deleted.

Chapter III. House of Delegates would read:

"Section 2A. Each Medical School Component Society shall be entitled to send each year two delegates, elected by the Component Society, to the House of Delegates at the Annual and Interim Sessions. Each delegate shall be a member in good standing with this Association and the Component Medical Society. Such student delegates shall enjoy all the rights and privileges of all other delegates."

The following changes would be made in **Chapter IV. Election of Officers:**

"Section 1. The President on the first day of the Annual Session shall select a Committee on Nominations consisting of eleven delegates, one from each Councilor District and one from a Medical School component society."

"Section 4B. Delegates from the four Medical School Component Societies shall combine and elect one Councilor and one Vice-Councilor. The duly elected Councilor and Vice-Councilor from the medical student component societies shall serve on an annual renewable basis."

The Bylaws would also be changed to include "the per capita levy for student members shall be $5.00 per year" and to add "medical student" to appropriate sections in the Bylaws.

Deadline for resolutions in Handbook is Oct. 10

The fourth Interim Session of the Missouri State Medical Association's House of Delegates will be held Nov. 10-11, 1979, at the Ramada Inn in Columbia.

Component societies and members who wish to introduce Resolutions to be included in the Delegate's Handbook must send them to the MSMA Headquarters by Oct. 10. Handbooks will be mailed to Delegates around Oct. 15.

The schedule for the two-day meeting will be as follows: Delegate Registration will begin at 8:30 a.m., Saturday, Nov. 10. The Opening Session of the House is set for 11:30 a.m. Reference Committees will meet at approximately 12:30 p.m. and continue until testimony is completed. The Final Session of the House will begin at 7:30 a.m., Sunday, Nov. 11.

All MSMA members are invited to attend the Interim Session and to testify before the Reference Committees.

AMA acts on MSMA resolutions; re-elects Dr. Ritter to Board

During the annual meeting of the AMA House of Delegates in Chicago, action was taken on two resolutions submitted by the Missouri delegation to the AMA.

The first resolution asks that the AMA collect data to compare the rate of cost increase in federal and private hospitals and publicize the results. The resolution was adopted.

A substitute resolution was adopted in lieu of three resolutions concerning physician participation in armed services reserves:

"RESOLVED, That the House of Delegates of the American Medical Association endorse improvement of the military medical reserve program and the National Guard program to attract needed physician participation, with appropriate statutory safeguards against individual involuntary recall or retention; and be it further

RESOLVED, That the American Medical Association, in its publications and in its relationships with state and county societies publicize the physician shortage in the Reserve and National Guard components of the Armed Forces and the serious implications thereof; and be it further

RESOLVED, That the Department of Defense be advised that the Armed Forces Reserve and National Guard recruitment efforts would be improved if physicians were utilized according to their capabilities and training, and appropriately compensated for their time."

Also at the meeting, Dr. Hubert A. Ritter was reelected to the AMA Board of Trustees. He has been a member of the Board since 1976.

Dr. George E. Thoma was unsuccessful in his first bid for membership on the AMA Council on Medical Education. Dr. Thoma was among seven candidates vying for two positions on the Council.

Please see the August 3/10 issue of American Medical News for detailed coverage of the AMA meeting.

Cooling rules exempt physicians

Physicians' offices are generally exempt from federal energy rules prohibiting the cooling of public buildings below 78 degrees.

Regulations state that exemptions are granted when maintenance of certain temperature levels are required to "protect the health of persons in offices of physicians, dentists, and other members of health care professions licensed by the state to provide health-related services." Hospitals received a blanket exemption from the regulations.

According to officials in the federal Department of Energy, it is up to each physician to decide what level of cooling is required to protect the health of his patients. Physicians should write memoranda to their files explaining what factors were involved in reaching their decisions, officials said.

Summer Search for measles

An intensive Summer Search is being launched by the Missouri Division of Health to locate and isolate every case of measles in the state.

This special immunization project is being conducted from August 1 through September 30 in ten midwestern states, including Missouri.

Weekly phone calls will be made to physicians, hospitals, university and college health centers, day care administrators and public health offices in an effort to locate every case of suspected measles. The callers will ask about all rash illnesses with fever.

When a case is reported, it will be investigated within 24 hours and steps taken to immunize all susceptible persons in contact with the illness.

The design of the program is to determine where the measles disease goes during the summer months. Health officials decided the disease might best be eliminated during the late summer weeks when the report rate normally is at its lowest.

For further information, please contact your local or district public health office.

CPI shows lower increase in health care costs

May was the fourth straight month in which inflation in the general economy was greater than the rate of increase in health care costs.

A report from the Consumer Price Index (CPI) released June 26, 1979 states that the all-items component rose 1.2%, compared to the 0.5% for the medical care component. Physicians' services increased 0.7% during the month, and hospital room charges rose 0.4%.

During the 12 month period May 1978 through May 1979, the all-items index rose 10.8% and the medical care component went up 8.9%. Physicians' services rose 9.1% and hospital room charges 11.3% during that period.

MSMA sends mailing urging AMA membership

In July, all members of the MSMA who are not also members of the AMA received a letter urging them to join the national organization. The mailing included a statement for AMA dues only.

In the past, the AMA made this solicitation directly from Chicago. The MSMA gained permission to preempt the AMA solicitation this year because it was hoped that the state association could convince more physicians of the need to support the AMA.

The MSMA membership total for 1978 was 5,229. Of those, 3,853 physicians belonged to the AMA.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

owell G. Bennett
ieltone Hearing Aid Service
318 W. Walnut Street
ipringfield, Missouri 65806
417) 866-0551

en Gidley
ieltone Kansas City Hearing Aid Service
001A Grand Avenue
ansas City, Missouri 64106
816) 471-1943 (816) 471-4105

ieltone Hearing Aid Service
22 Kirkpatrick Building
it. Joseph, Missouri 64501
816) 279-6501

)on Hicks
ieltone Hearing Aid Service
lorth Park Mall
01 Range Line Room 248
oplin, Missouri 64801
417) 624-0931

)ean Jones
ieltone Hearing Aid Service
.O. Box 682 400 E. High
efferson City, Missouri 65101
314) 635-3557

ieltone Hearing Aid Service
21 North 10th
Columbia, Missouri 65201
314) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Service
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Service
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Service
State Fair Shopping Center
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

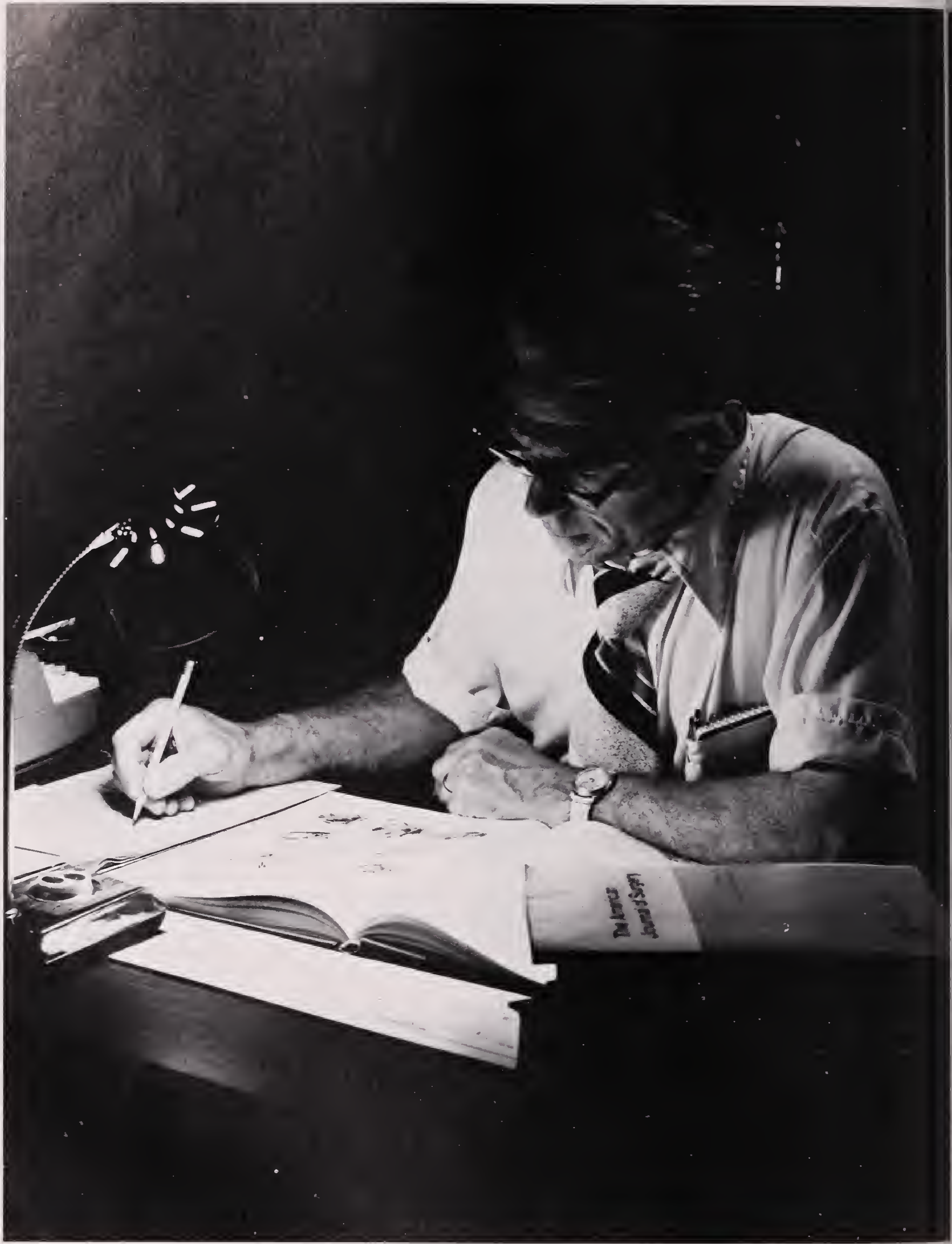
Beltone Hearing Aid Service
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Service
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

Beltone Hearing Aid Service
320 Spring
Sweet Springs, Missouri 65351
(816) 335-6727

Beltone
WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

Photo-Comment by James W. Clawson, M.D., Springfi



The 'REAL' CME.

Editor's Corner

A COMMENT ON CME

In any problem situation affecting humans, there will be efforts at correction. Human frailty, being what it has always been, only some of these efforts will be logical. Most will be foolish because the very swing of correction will provoke a counter-swing at least as faulty. Never has this been more true in my experience than in the frantic surge to CME.

I am sure this began with a well-intended move to place medicine in a better light, although I am not so sure what prompted the effort. It has never been proven to me that the medical profession has lagged in progress, nor in its understanding of progress. In fact, if American sociology, the American legal system, the American educational concept or the American press had shown the progress of American medicine during the last half-century, our culture would now be on an infinitely more level keel.

But the most reprehensible to me in this CME game has been the carnival atmosphere of medical evangelists charging about the country delivering sermons of often dubious quality. Most of these subjects could be better covered in print, without travel expense and a surcharge of $10 per hour of earned credit. The same groups crop up here and there, coast to coast. One on the mailing list finally gets the uncomfortable realization that he is financing vacations for the faculty and, as a bonus, for himself. I may be reducing CME to the most brutal common denominator, but I believe this is where most of it should rest.

I do not underestimate the need for the physician to remain well informed. Nor am I thinking this is easy in a technical field with a 50% turnover of knowledge each five years. However, if physicians are to share what is perhaps our society's most exalted profession, there is a price to pay. They have demonstrated, long since, they are in the elite of American intelligentsia or they would never have made it through medical school. Once in practice, it is up to them to behave like intelligentsia if they expect to reap the benefits.

Even so, don't expect what is not deliverable. A cross section of physicians, the same as with plumbers or nuclear physicists, will reveal the few lazy or inept, the many journeymen and the occasional scholar. Human nature is human nature, wherever one finds it.

But there are ample ways for a good physician to remain good without the incentive of CME, which I regard as an intrusion on him and as an effective device to legitimize the poor physician. The latter can sleep through a CME session quite as well as at home.

Basically, I think we should remember there is no way to legislate excellence. In the competent, excellence will come by desire. The man who is not driven to excellence within himself can invent ways around the rules faster than new rules can be made.

For the most part, CME is an embarrassment and an affront to the dignity of the medical profession.

Wilfred E. Wooldridge, M.D.

in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

EFFORTS TO REGULATE physician supply are underway in several states and similar proposals are likely to develop in other states, the AMA warned in a memorandum to constituent associations and specialty societies. In Hawaii and Rhode Island, state health planning agencies are seeking to impose certificate-of-need licensure based on predetermined estimates of the number of physicians required. In California and New York, health planners are working to limit the number of physicians by regulating residency training. The AMA memo points out that proposals to manipulate the types of physicians being trained were defeated at the federal level in 1976 during consideration of the Health Professions Education Assistance Act. Attempts by states to use the National Health Planning and Resources Development Act for this purpose are outside the scope of the law, the AMA said.

GENEROUS SUPPORT for the loan guarantee program was urged in a letter to all AMA members from AMA-ERF President Hubert A. Ritter, M.D. Reserves for the program, which assists medical students and residents nationwide, will be almost totally committed by the end of the year. AMA-ERF was forced to impose a limit of 50 loans per school in 1979 and may have to reduce this number in 1980, he said. AMA-ERF now has $44 million in loans outstanding. For each tax-deductible dollar contributed to AMA-ERF for the program, participating banks will lend $12.50.

AN AD HOC COMMITTEE on the involvement of Women Physicians in Organized Medicine will be established by the AMA Board of Trustees. The committee will explore methods of encouraging the participation of women physicians at all levels of the Federation, develop methods to increase involvement over the next one to three years and recommend mechanisms to ensure continued involvement in activities throughout organized medicine. The committee is expected to complete its work in one year.

MEDICAL SOCIETIES are invited to cospon sor AMA practice management programs this fall Courses on the business aspect of medical prac tice will be offered to office personnel and phy sicians. Also available to physicians will be ses sions on practice and financial management Payment collection, appointment scheduling an patient management are among the courses to b offered for medical assistants. To date, the AM programs have been cosponsored by more tha 100 state and county medical societies. For mor information, contact Department of Practic Management, (312) 751-6380, AMA Headquar ters.

THE AMA ASKED HEW for copies of all ma terials showing how the Administration's pro posed hospital cost containment bill would sav $53,370,000,000 during the years 1980-1984. Th figure was contained in HEW's March 5 "Hospita Cost Containment Legislation Summary Fac Sheet." Under the Freedom of Information Act the AMA requested documentation of th methodology, assumptions, models and formula used as the basis for the figure. If any portion o the request is denied, the AMA said in a letter t Secretary Joseph Califano, the Association wants a detailed statement telling why.

THE NUMBER OF participating states in th AMA Jail Project is expected to be expanded to 2 during the next year. The AMA's program to hel improve health care in the nation's jails will be continued under a $1,296,460 contract with the Law Enforcement Assistance Administration o the U. S. Justice Department. The Association will provide technical assistance to facilitate widespread adoption of health care standards developed by the AMA for correctional institutions. Sixteen state medical societies, using staff and volunteer physicians, are now working to implement the program at the state level. At present, 35 jails have been accreditated in the 16 states where medical societies are participating in the program through subcontracts with the AMA.

When the indications surface…
Net wt 1 oz
Net wt 1/2 oz
Net wt 1/32 oz
(approx)
NDC-0081-07
Net wt 1 oz
NEOSPORI
OINTMEN
POLYMYXIN B-BACITRACIN-
TOPICAL ANTIBACTE
Net wt ½ oz
NEOSPORI
OINTMENT
Net wt. 1/32 oz (approx.)
NEOSPORIN
POLYMYXIN B-BACI
TOPICAL ANT

NEOSPORIN® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base), special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa; primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis); traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Pinworm: simply awful
[illegible] Pharmaceutical Corporation [illegible]

Vermox: awfully simple

No dosage calculation

one dose single VERMOX 100 mg tablet is the treatment for pinworm in both adults and children* of all body weights; no dosage calculations or confusion

one time the VERMOX tablet may be taken any time that is convenient, so that normal routines won't be interrupted; convenient schedule encourages compliance

one tablet chewable, orange-flavored VERMOX tablet may also be crushed and mixed or simply swallowed; no messy liquid to spill and no dye to stain

95% cure mean cure rate in clinical studies was 95% (range: 90%-100%) after treatment with one VERMOX tablet; in cases of reinfection, a second tablet is advised

* Because Vermox has not been extensively studied in children under two years of age, the relative benefit/risk should be considered before treating these children. Vermox is contraindicated in pregnancy (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

Vermox chewable tablets
TRADEMARK
(mebendazole)

tion VERMOX (mebendazole) is methyl
ylbenzimidazole-2-carbamate.
VERMOX exerts its anthelmintic effect by
glucose uptake by the susceptible helminths,
depleting the energy level until it becomes
ite for survival.
pproximately 2% of administered meben-
excreted in urine as unchanged drug or a
metabolite. Following administration of 100 mg
ndazole twice daily for three consecutive days,
evels of mebendazole and its primary
ite, the 2-amine, never exceeded 0.03 μ g/ml
μ g/ml, respectively.
ons VERMOX is indicated for the treatment of
s trichiura (whipworm), *Enterobius vermicularis*
m), *Ascaris lumbricoides* (roundworm), *Ancylos-*
odenale (common hookworm), *Necator ameri-*
merican hookworm) in single or mixed infections.
varies in function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains.

Contraindications VERMOX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

Precautions *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

Adverse reactions Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

Dosage and administration The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food.

For the control of pinworm (enterobiasis), a single tablet is administered orally, one time.

For the control of roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days.

If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

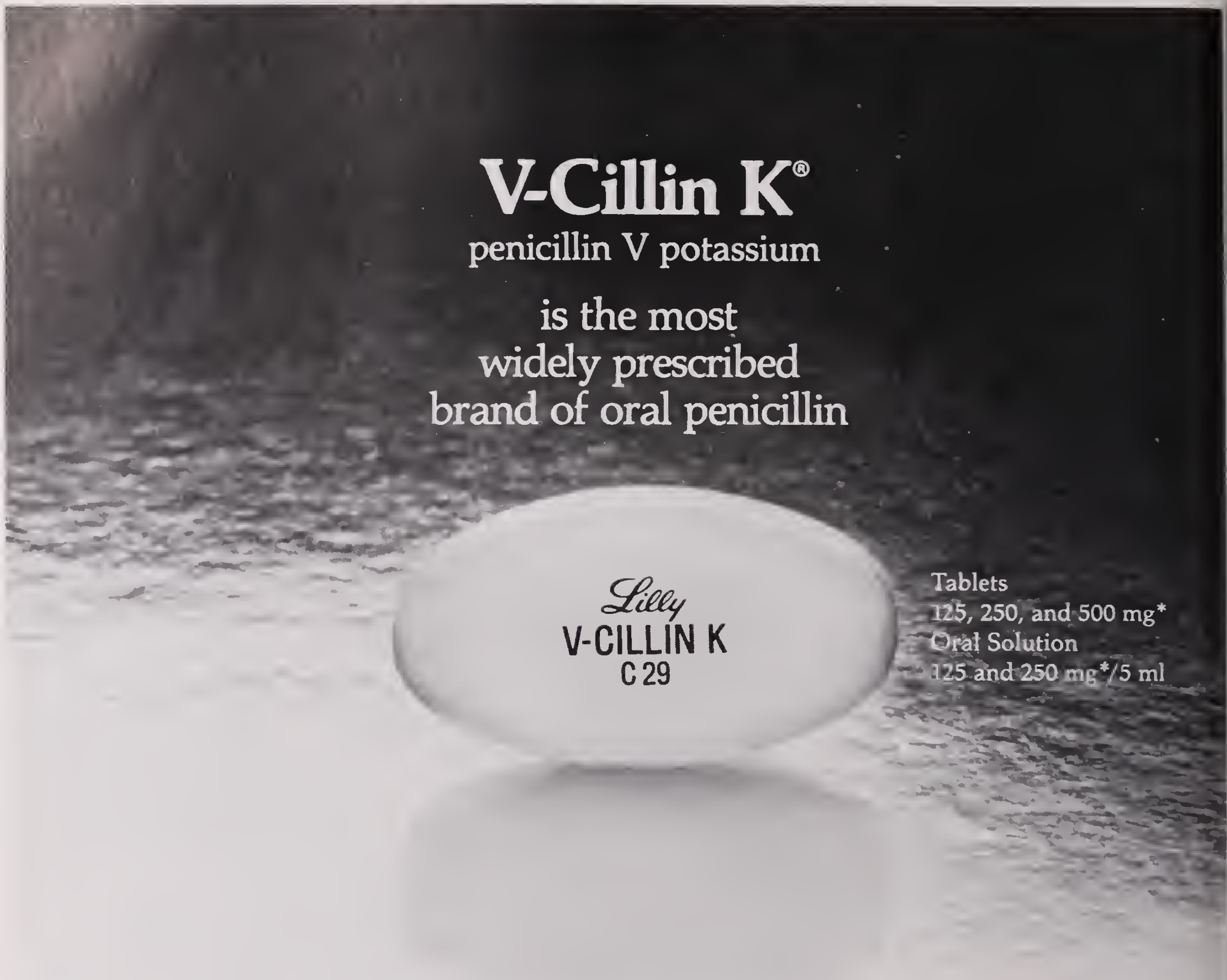
How supplied VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.

VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium, and co-developed by Ortho Pharmaceutical Corporation.

PHARMACEUTICAL CORPORATION
New Jersey 08869

OJ-1511

ORTHO



V-Cillin K®
penicillin V potassium

Description: V-Cillin K is the potassium salt of penicillin V. This chemically improved form combines acid stability with immediate solubility and rapid absorption.

Indications: For the treatment of mild to moderately severe pneumococcal respiratory tract infections and mild staphylococcal skin and soft-tissue infections that are sensitive to penicillin G. See the package literature for other indications.

Contraindication: Previous hypersensitivity to penicillin.

Warnings: Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

Precautions: Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin. [102175]

***Equivalent to penicillin V.**

Additional information available to the profession on request.

Lilly
Eli Lilly and Company
Indianapolis, Indiana 46206

900416

Volume 76, Number 8 — August, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1979 BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

JOHN GRAGNANI, M.D., *St. Louis*

Current Concepts of Back Pain

LOW BACK PAIN, with little doubt, is one of the most common complaints of civilized man. Patients seek help for every imaginable degree and variation of back discomfort and may be seen by a variety of physicians. The etiologies of low back pain and its treatment could and do fill volumes.

In an effort to simplify this familiar problem, we will classify low back pain in two groups; that arising as the result of root injury from disk herniation and that arising from musculoskeletal mechanical difficulties.

DISCOGENIC BACK PAIN

Herniation of a nucleus pulposus is usually the result of degenerative changes within the aging intervertebral disk. Normal daily stresses, combined with occasional abnormal stresses, weaken the annular fibers to the point that even normal back activity may result in herniation.

The disk between L-5 and S-1 vertebrae is the most common site of herniation, with posterior-lateral extrusion resulting in S-1 root compression.[1] The complaints accompanying disk rupture include radiation of pain down the buttocks, thigh and leg, which is made worse by coughing, sneezing or straining at stool. One interesting fact is that reliable dermatomal pain radiation may not always be found because of sensory field overlap. One must also bear in mind that sciatica can also be caused by nerve irritation from a number of causes. The pain, when present, may be described as a "toothache-like" pain shooting down the thigh and calf. Motor changes tend to occur less frequently but, when present, are helpful in making the diagnosis and important in determining the mode of treatment.

A diagnosis of disk herniation at lumbar or sacral levels is dependent on a good history and careful physical examination combined with at least a set of lumbosacral spine films. If the physical examination is positive or suspicious for disk rupture, additional diagnostic aids may be sought. A needle electromyogram of the muscles of the root involved may be helpful in confirming root compression. There is controversy as to whether or not the exact level of root compression can be determined by electromyography, but certainly it is helpful in detecting involvement and the level of root compression (at least three weeks are required for signs of denervation to develop following nerve damage with axon death).

A myelogram should be performed in all cases in which disk rupture is highly suspected or confirmed by physical and electromyographic examination. The myelogram will assist in localizing the position of the ruptured disk which is useful not only in confirming the diagnosis but, also, in aiding the surgeon if laminectomy becomes necessary. Besides being an invasive procedure, however, the myelogram is also subject to false-negative and false-positive results. Some workers have reported that the electromyogram is a more reliable diagnostic aid than the myelogram.[1] Certainly, cases which are questionable on physical examination should be referred for electromyography before a myelogram is ordered. If results of both tests are negative, one must rely on the physical findings.

Although back pain is a common complaint of patients, the causes are not always simple or clear. To classify them, the author divides back pain into two major categories: back pain secondary to discogenic problems and back pain secondary to mechanical deficits. He offers a simple format for diagnosis and treatment of both groups. It is hoped that this classification will lead to an evaluation of proper back pain diagnosis and correct treatment approach.

Dr. Gragnani is Director, Department of Rehabilitation Medicine, St. John's Mercy Medical Center.

Treatment of nucleus herniation is dependent primarily on the physical findings. For patients with definite sensory or motor loss or both, particularly if they are progressive, surgical decompression of the involved roots should be recommended.[2] For patients experiencing only pain or pain without subjective sensory changes with progression, strict bed rest for a period not less than two weeks may be attempted. Epidural steroid injections may be attempted to assist in reducing the inflammation which is often felt to accompany disk rupture and cause root irritation. Oral anti-inflammatories may also be applied. Analgesic medication should be used cautiously. Narcotics should be avoided or used with extreme reserve.

If pain and symptoms recur or persist and, particularly, if neurologic signs progress, surgery is the more definitve treatment. Following surgery, it has been our policy to recommend a good back exercise program and education on proper body mechanics for prevention of future injury.

BACK PAIN OF A MECHANICAL ORIGIN

While disk herniation is the commonly considered cause for back pain and is usually at the top of the differential diagnosis list, not all radiating thigh and leg pain represents disk rupture.[3] The single most common etiology for back pain is mechanical dysfunction of normal spinal mechanisms. There are few of us in medicine who have not seen the overweight, out-of-condition patient who overdid it in the garden or slipped down his terrace and developed back discomfort. Daily, most of us fall behind in maintaining good muscle tone and adequate range of motion. Conditioning, proper posture and good body mechanics are important in maintaining a pain-free back. Even the well conditioned patients, such as the avid jogger, may develop low back pain if an adequate muscular stretching program for his legs and back is not observed. Proper chairs and good sitting posture are also important in occupations which necessitate prolonged desk work.[4]

Diagnosis of mechanical low back pain is essentially made by good history and physical examination. The history usually includes a dull, persistent pain which may radiate from the back through the buttocks into the thighs. It is rather unusual to have a dermatomal type distribution reported in this type of back pain. There may be subjective changes reported to light touch, but the sensory and, certainly, the motor responses are intact. Reflexes are symmetrical at knees and ankles, and no upper motor neuron signs are present. Usually found on careful physical examination are all or some of the following: increase in the lumbar lordotic curve, paraspinal muscle spasm and tenderness to palpation over the greater sciatic notch with pain radiating to the knee or upper calf.[5]

An important point to remember is that straight leg raising may certainly produce discomfort, but it rarely generates a radicular type pain. In these cases, a negative Lasegue sign (quick passive dorsiflexion of the foot with the leg held in a comfortable slightly hip-flexed position and knee extended) is helpful in ruling out radicular type compression pain.[6] Appropriate spine films are essential to rule out possible fractures or marked abnormalities. Minor anatomic variations, such as lumbarization of the S-1 vertebra or spina bifida occulta, may be seen on x-ray and may or may not be a contributing factor to the discomfort. Electromyography or myelogram are not indicated unless the initial work-up is confusing or a disk rupture, tumor, or fracture are suspected.

Treatment of mechanical low back pain can often be relatively simple and rewarding. When one rules out the malingerer, the severely neurotic or the patient with strong secondary gains, many patients with low back pain syndrome can and do respond well to therapy.

Initiation of treatment for the acute back strain should be with a period of about one week of strict bed rest accompanied by anti-inflammatory medications which may consist of 0.6 gm of buffered aspirin four times daily or 0.2 gm of phenylbutazone per day in two divided doses for a period of one week. Again, analgesics should be used sparingly and muscle relaxants have limited enefit. Ice packs are effective in reducing pain ensation and can be used freely. Hot packs are lso useful, but we have found ice to be a more otent anesthetic. Heating pads should be disouraged because of the risk of superficial burns.

Following the one week of bed rest, the patient hould be started on a progressive back exercise rogram tailored to the patient's needs. Exercises re designed primarily to increase muscle tone in mportant muscle groups, such as the paraspinals nd abdominals, and to increase the range of moion and decrease lumbar lordosis and reduce ightness in the hamstrings and tensor fascia lata. n addition to exercise conditioning, tight areas vithin the spinal segments may be manually nobilized by the physical therapist who is trained n such techniques.

Such mobilizations and manipulations are well lescribed[6, 7] and may be used safely by experinced therapists on patients who do not have racture, spondylolisthesis, severe degenerative rthritis of the spine, tumor, rheumatoid arthritis r rheumatoid spondylitis or severe osteopenia. 'inally, these patients should be placed on a ome exercise maintenance program and eduated as to proper body mechanics and posture. ack braces and corsettes are generally not precribed because of their tendency to further veaken the abdominal muscles.

The chronic, mechanical low-back-pain patient s treated essentially in the same fashion as the cute patient except that no period of bed rest is sually necessary. These patients may be started mmediately on a back exercise, mobilization proram. Postoperative laminectomy patients may lso benefit from the same regimen. All patients re encouraged to walk. Surgical treatment with usion is becoming less popular in the treatment of hronic low back pain[8] and, for mechanical reasons, probably causes more discomfort on the whole.

SUMMARY

Somewhere between 80% to 90% of most back pain seen in daily practice is mechanical in origin. Disk herniation accounts for another 10% to 15% with a small percentage going to tumor, fracture or unusual metabolic problems. A careful history and physical examination is the most reliable diagnostic method. Treatment has many approaches, but good muscle tone and proper body mechanics are the best ways to ensure satisfactory results for existing back pain and prophylaxis. The success of such a program relies on proper selection of patients and good technique in the application of therapy combined with encouragement and understanding of the patient. The goal of treatment should be not only relief of pain but, also, improvement in function and prevention of future difficulties. Ideally, back education programs could and should be established to reduce the occurrence of back neglect and injury and to reduce the likelihood of producing "back cripples," who are so costly in terms of money, time and human misery.

REFERENCES

1. Goodgold, Joseph and Eberstein, Arthur: Electrodiagnosis of Neuromuscular Diseases, 2nd ed. Williams and Wilkins Co., pp. 200-207.
2. Wiltse, Leon, L.: "Surgery for Intervertebral Disk Disease of the Lumbar Spine. Clinical Orthopedics and Related Research, No. 129 Nov.-Dec. 1977, pp. 22-45.
3. Macnab, Ian: Backache. Williams and Wilkins Co., pp. 20-23.
4. Kottke, Fredric, J., "Evaluation and Treatment of Low Back Pain Due to Mechanical Causes, Archives of Physical Medicine and Rehabilitation, June 1961, pp. 426-440.
5. Cailliet, Rene, M.D.: Low Back Pain Syndrome, 2nd ed. F. A. Davis Co., pp. 5, 33-48, and 124.
6. Mennell, John: Back Pain, Diagnosis and Treatment Using Manipulative Techniques. Little Brown and Company, pp. 109-128.
7. Maitland, G. D.: Vertebral Manipulation, 4 ed. Butterworths, pp. 137-167.
8. Gartland, John J., M.D.: Fundamentals of Orthopaedics, 2nd ed. W. B. Saunders Co., p. 323.

"The Physician and the Mental Health of the Child," a new AMA guidebook, assesses the development and treatment of disorders within a family context. The book is based on the proceedings of the 1976-1977 AMA Workshops on the Mental Health of the Child and was produced on contract with the National Institutes of Mental Health. Copies are available for $4 from AMA Order Dept., P.O. Box 821, Monroe, Wis. 53566.

DAVID W. VICTOR, M.D., JOHN D. HALVERSON, M.D.
and HARVEY R. BUTCHER, M.D., *St. Loui*

Internal Iliac Artery Aneurysm: Unusual Cause of Lower Abdominal and Pelvic Symptoms

Case Reports

THE DIAGNOSIS of isolated internal iliac artery aneurysms is made difficult by their infrequent occurrence[1] and by their inaccessibility deep in the pelvis. However, a review of four cases from the Washington University surgical service and 12 cases from the literature reveals several striking similarities.

CASE REPORTS

Case #1 An 80-year-old man developed severe testicular pain and pain in both flanks. At admission four days later, a physical examination showed slight abdominal tenderness and bilateral scrotal ecchymosis. An upright abdominal X-ray showed free air under the diaphragm. A laparotomy revealed a ruptured sigmoid diverticulum adherent to a left internal iliac artery aneurysm which had ruptured into the retroperitoneal space.

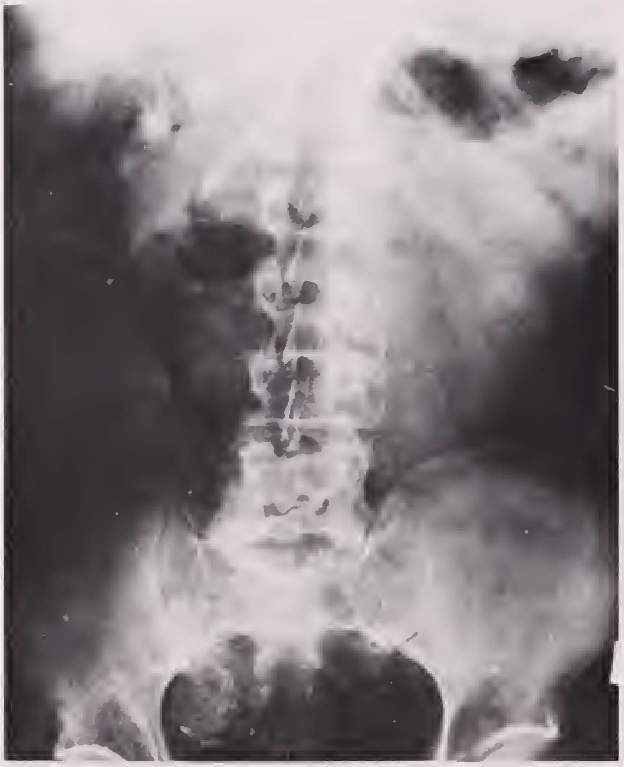


Fig. 1 Flat plate of the abdomen, Case #2.

The aneurysm was resected and the proximal internal iliac artery was oversewn. A sigmoid colostomy an Hartman's pouch were created. The ureter was no identified.

Postoperatively, a retroperitoneal collection of urin (most likely due to an injury of the left ureter) developed and a left nephrectomy was performed. Postoperatively, sepsis and multiple enteric fistulae developed. After a long course, the patient died.

Case #2 An 87-year-old man had a right lowe quadrant pulsatile mass. A radiograph of the abdome showed the mass to be calcified (Fig. 1). An aortofemoral arteriogram showed a right internal iliac artery aneurysm (Fig. 2). The patient did not complain o symptoms attributable to this mass. At the operation the aneurysm filled the pelvis. It extended slightly int the right common iliac artery. The aneurysm and th aneurysmal portion of the common iliac artery wer removed and a graft was inserted from the aorta to th external iliac artery.

Postoperatively, the patient did well until the thir day when he abruptly became short of breath and died

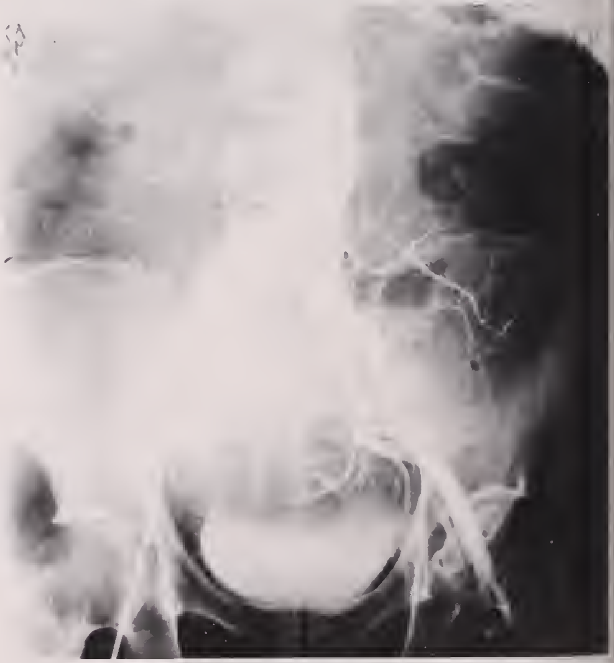


Fig. 2 Abdominal arteriogram, Case #2.

postmortem examination was refused and the cause f death was not determined.

Case #3 A 70-year-old man had a three-day history f severe low back pain, thigh and leg pain and ex- ruciating testicular pain. Previously, a 4.5 cm ab- ominal aortic aneurysm had been diagnosed by onogram. Results of a barium enema two and a half ears prior to his admission suggested a mass displac- ng the sigmoid colon to the left. Two years prior to dmission, the patient's serum creatinine level had ncreased from 2.1 mg to 7.7 mg per dl. On examina- on, a lower abdominal pulsatile mass was present ith a bruit overlying it. An abdominal radiograph howed flecks of calcium on the left side of the pelvis. t operation, a left internal iliac artery aneurysm filled ne pelvis and the aorta and left common iliac artery ere slightly dilated. The internal iliac artery an- urysm was resected and a Y-graft was inserted from ne aorta to the left external iliac and to the right ommon iliac artery. The patient died of respiratory ilure in the recovery room.

Case # A 74-year-old man complained of dysuria, ight inguinal pain and urinary frequency of five days uration. The tentative admission diagnosis of pro- tatic hypertrophy was made. Results of his abdominal xamination were normal on admission. Several days ter, he complained of increased inguinal pain. He ecame febrile, and his arterial pressure dropped. At his time, a palpable mass was medial to the anterior uperior iliac spine and he was tender over the right ank. Bowel sounds were decreased and the right esticle was tender.

The operative diagnosis was that of a perforated etrocecal appendix or ruptured cecal carcinoma. At aparotomy, blood was immediately encountered. This ame from a 5 cm ruptured aneurysm of the right nternal iliac artery. The iliac vein was torn in an at- empt to control the bleeding and the patient exsan- uinated.

ISCUSSION

Internal iliac artery aneurysms are a rare form f abdominal aneurysm.[1, 2, 3] They are most kely encountered with aneurysms of the distal orta and other iliac vessels. It has been our ex- erience that the diagnosis of isolated internal iac artery aneurysms is quite difficult. However, he clinical presentation is frequently typical ompared to other types of abdominal aneurysms. n addition, probably because of the anatomic ocation within the pelvis, these aneurysms are elatively large at the time of their discovery Table 1). In fact, many are never detected until hey have ruptured (six of 16).

In four of our patients (and in eight of 12 in the iterature), arteriosclerosis was the apparent ause of the aneurysm. Interestingly, all patients ith arteriosclerotic aneurysms were men. Per- aps the android pelvis contributes to the vessel's

Because of the pelvic locations of isolated internal iliac artery aneurysms, which are rare, their signs and symptoms are different from those of aortic aneurysms. They frequently are very large at the time of discovery, have a high incidence of rupture and are often unsuspected preoperatively. Early diagnosis is essential because of the high incidence of rupture. The treatment is surgical excision of the aneurysm.

Dr. Victor is Resident in Surgery, Dr. Halverson is Assistant Professor of Surgery and Dr. Butcher is Professor of Surgery, Washington University School of Medicine.

TABLE 1
FACTORS ASSOCIATED WITH INTERNAL ILIAC ARTERY ANEURYSM

	Our Cases	*Literature*	*Total – %*
History			
1. Inguinal, testicular, anterior thigh pain	3	6	9 — 56
2. Signs and symptoms of ureteral obstruction	3	5	8 — 50
3. Acute abdomen	2	1	3 — 18
4. Rectal bleeding	—	2	2 — 12.5
Physical exam			
5. Palpable abdominally	4	4	8 — 50
6. Palpable rectally or vaginally	—	9	9 — 56
Radiographic			
7. Barium enema helpful in diagnosis	1	2	3 — 18
8. IVP, cystogram or ureterogram helpful	1	2	3 — 18
9. Diagnosed by angiogram	1	1	2 — 12.5
10. Plain film of abdomen helpful	2	1	3 — 18
Operative			
11. Not suspected preoperatively*	3	5	8 — 50
12. Ruptured colonic diverticulum	1	—	1 — 6.25
13. Described as very large or "filling the pelvis"	3	10	13 — 81
14. Found ruptured at operation	2	4	6 — 37.5
15. Ureter involved	2	4	6 — 37.5
Other			
16. Arteriosclerotic origin†	4	8	12 — 75
17. Traumatic origin‡	—	4	4 — 25
18. Male patient	4	9	13 — 81
19. Mortality	4	4	8 — 50

* In three of five cases from the literature, no mention of the preoperative diagnosis was made; presumedly the diagnosis was not suspected.
† All men.
‡ Three out of four were women.

tortuosity and subsequent aneurysm formation. Three of four patients with aneurysms related to trauma were women. Three of the aneurysms were presumed to be secondary to high forceps deliveries, and one was thought to be related to a previous high ischiorectal abscess. None of the cases was syphilitic in origin.

Important clues that should aid the clinician in an early diagnosis include testicular, inguinal or thigh pain. We have found testicular pain and, in one case, scrotal ecchymosis to be important, rather unique symptoms that were present in two of four of our patients. Other findings related to the genitourinary included dysuria, frequency and hematuria. The ureter is frequently displaced by the aneurysms, producing pain, obstruction, pyelonephritis or dysuria. Intravenous pyelogram, cystogram, and ureterogram were helpful in diagnosing several cases (Table 1). Also, a barium enema, rectal examination, and rectal bleeding (when rupture had occurred) were similarly suggestive of the diagnosis. As with abdominal aortic aneurysms, abdominal palpation, radiographs of the abdomen showing calcifications and arteriograms were sometimes useful in making the diagnosis.

The ideal treatment of internal iliac artery aneurysms is resection with ligation of the proximal vessel. However, survivors are reported in the literature after simple ligation of the aneurysm. Because this aneurysm often extends into and around common and external iliac arteries, it may be necessary to remove a portion of these vessels and to place a graft from the aorta or common iliac to the external iliac artery. Extreme caution must be taken to avoid injury to the ureter, which may be densely adherent to the aneurysm (Table 1). If the diagnosis is suspected but not proven, the patient should be explored transabdominally through a midline incision because o the frequent association with other aneurysms When arteriography shows an isolated interna iliac artery aneurysm, a retroperitoneal approach can be used.[4]

CONCLUSION

A patient with testicular, anterior thigh, inguinal or scrotal ecchymosis (which indicates rupture) with a palpable pulsatile mass in the lower abdomen (or pelvis) should suggest the diagnosis of an internal iliac artery aneurysm. An intravenous pyelogram, barium enema, radiograph o the abdomen and arteriography may be useful in establishing the diagnosis. Once the diagnosis has been made, surgical excision should be carried out. The morbidity and mortality should be reduced by earlier diagnosis and treatment.

REFERENCES

1. Silver, D., Anderson, E., and Porter, J. M.: Isolated Hypogastric Artery Aneurysms. Arch. of Surg. 95:308, 1967.

2. Long, M. C.: Aneurysms of the Iliac Arteries. J. of Gerontology 3:105 1948.

3. Markowitz, A. M. and Norman, J. C.: Aneurysms of the Iliac Artery Annals of Surgery. 154:777, 1961.

4. Kirkland, K. and Starr, K.: Aneurysm of the Right Internal Iliac Artery — Five-Year Cure. Med. J. of Australia 2:299, 1953.

Reprints: John D. Halverson, M.D.
Dept. of Surgery
Washington University
4960 Audubon
St. Louis, Mo. 63110

The American Cancer Society National Conference on Cancer Prevention and Detection will be held on April 17-19, 1980 at the Palmer House in Chicago. Experts representing various disciplines will present current ideas concerning exogenous and endogenous factors in cancer causation and methods of cancer prevention and detection. Controversial areas in cancer control programs will be reviewed.

Attendance is limited to physicians, dentists, medical students and cancer research investigators at the doctoral level. The conference meets the criteria for 14½ hours in Category I of the AMA Physician's Recognition Award and is acceptable for 14½ prescribed hours by the AAFP.

For further information, write to Nicholas G. Bottiglieri, M.D., American Cancer Society, National Conference, Cancer Prevention and Detection, 777 Third Ave., New York, NY 10017.

The Great Laxative Escape
COLACE®
dioctyl sodium sulfosuccinate

Colace means escape—from laxative stimulation, from laxative harshness, from laxative habit. Colace gently helps soften stools for easy, painless, unstrained elimination. It's the great laxative escape, from infancy to old age. Available in 100 and 50 mg. capsules. Syrup or liquid.

Mead Johnson
PHARMACEUTICAL DIVISION

©1978 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. J578-1

This asthmatic isn't worried about his next breath...

he's active
he's effectively
maintained on

QUIBRON®

Each capsule or tablespoonful (15 ml) liquid contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg

- theophylline for effective around-the-clock bronchodilator therapy
- 100% free theophylline

Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.
Warnings: Do not administer more frequently than every 6 hours or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.
Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e. clindomycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.
Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.
How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100. Liquid in bottles of 1 pint and 1 gallon.
See package insert for complete prescribing information.

Mead Johnson PHARMACEUTICAL DIVISION

© 1979 Mead Johnson & Company • Evansville, Indiana 47721 U.S.A. MJL 8-4294R2

N. DENNY CRISP, M.D. *and*
L. BEATY PEMBERTON, M.D., *Kansas City*

Management of Obscure Causes of Benign Obstructive Jaundice

THE TREATMENT OF OBSTRUCTIVE JAUNDICE from carcinoma of the pancreas, the ampulla of Vater and bile ducts is well understood to be biliary diversion with or without resection and from choledocholithiasis is usually stone removal and T-tube drainage. The operative management of other benign causes of obstructive jaundice may be perplexing and unclear. The operative dilemma is how to manage obstructive jaundice when the cause appears to be a benign lesion with no common duct stones. In spite of negative frozen sections, it is possible that an undetected malignancy might still be producing the obstruction. The problem, then, is whether to treat the obstructive jaundice by common duct procedures, such as T-tube drainage or transduodenal sphincterotomy, or by intestinal diversion to bypass the obstruction.

METHODS

To help clarify this problem, the records of patients (1971 to 1977) with noncalculous benign obstructive jaundice were studied retrospectively. Seven patients had preoperative total bilirubins ranging from 4.1 to 51 mg% (Table 1). Other laboratory tests supported the diagnosis of posthepatic obstruction. Each patient underwent a laparotomy for obstructive jaundice.

Abdominal exploration consisted of identification of the site and cause of biliary obstruction, multiple biopsies with frozen section to rule out carcinoma, and common duct exploration. Table 2 gives the age, sex, diagnosis and operative management for each patient.

The operative procedures used to treat obstructive jaundice in these seven patients were two with T-tube drainage, one with sphincterotomy and four with intestinal diversion — two with choledochoduodenostomy and two with Roux-en-y choledochojejunostomy.

RESULTS

The results of operative treatment in these seven patients are recorded in Table 1. There was no operative mortality.

All seven patients have remained free of jaundice for six months to seven years. The operative procedure chosen for each patient did relieve the hyperbilirubinemia in spite of a recurrent upper abdominal disease in some patients. For example, Patient #2 remained free of jaundice after a choledochoduodenostomy even though she has had several documented episodes of pancreatitis. Two other patients, who underwent intestinal di-

TABLE 1
RESULTS IN SEVEN PATIENTS — TOTAL BILIRUBIN AND FOLLOW-UP

Patients	*Total Bilirubin (mg%)* PREOP	POSTOP	*Postop Follow-up*	*Remarks*
1	4.8	0.7	18 months	Recurrent abdominal pain, but percutaneous transhepatic cholangiogram confirms adequate biliary intestinal diversion.
2	4.6	0.3	7 years	IV cholangiogram shows prompt biliary diversion into duodenum. Recurrent pancreatitis.
3	51.2	2.1	13 months	No icterus or pain.
4	12	0.9	8 months	No pain or jaundice. Weight gain (20 lbs).
5	22	0.2	3 years	No jaundice or pain.
6	4.1	0.6	6 months	T-tube cholangiogram—small biliary ducts.
7	6.5	0.8	7 months	No jaundice or pain.

TABLE 2
DIAGNOSIS AND OPERATIVE MANAGEMENT OF EACH PATIENT WITH OBSTRUCTIVE JAUNDICE

Patient	*Age*	*Sex*	*Diagnosis*	*Operation*
#1	19	F	Choledochal cyst, incomplete common duct	Intestinal diversion — Roux-en-y cholecystectomy
#2	37	F	Chronic cholecystitis, chronic pancreatitis, fibrosis-obstruction of common duct	Intestinal diversion-choledochoduodenostomy, cholecystectomy, liver biopsy
#3	69	M	Common duct stone, cholelithiasis, chronic pancreatitis	Cholecystectomy, common duct exploration, T-tube
#4	60	M	Inflammatory stenosis, common duct obstruction	Excision fibrotic mass around common duct, intestinal diversion — Roux-en-y
#5	63	M	Stenosis of common bile duct from inflammatory lymph nodes	Excision lymph nodes, common duct exploration, sphincterotomy
#6	74	M	Sclerosing cholangitis	Cholecystectomy, insertion T-tube
#7	44	M	Chronic cholecystitis, pancreatitis, inflammatory nodes stenosing distal common duct	Intestinal diversion — choledochoduodenostomy, cholecystectomy.

version, have recurrent complaints of upper abdominal pain without jaundice.

Discussion

The operative management of benign obstructive jaundice involves two major problems. The first is to determine "what is the diagnosis?" To answer this question, the operative procedure includes an exploratory laparotomy with careful dissection of the common duct obstruction, multiple biopsies with frozen section and common duct exploration. Even if repeated biopsies demonstrate a benign obstructing lesion, the possibility of an underlying malignancy still exists and should be considered in the management of jaundice from a benign or obscure cause. The common causes of benign obstructive jaundice are listed in Table 3.[1, 2]

Although the treatment of obstructive jaundice from carcinoma or choledocholithiasis follows a fairly standard routine, the operative management of other benign causes of obstructive jaundice may be perplexing and unclear. The operative management of these patients is initially to identify the cause of obstruction and to rule out carcinoma. However, if the obstructing lesion is fixed, predisposed to inflammation or suspected to be a malignancy, definitive management in these patients is intestinal diversion of bile from the common duct.

Dr. Crisp is Senior Resident, Truman Medical Center, and Dr. Pemberton is Associate Professor, University of Missouri-Kansas City and Vice-Chairman, Department of Surgery, Truman Medical Center.

The second operative problem of treating benign obstructive jaundice is how to relieve jaundice without recurrence. Regardless of the cause, the operation should establish adequate drainage of the bile ducts into the intestine. If the cause of the obstruction is an inflammatory reaction or stone which can be treated or removed, common duct exploration and a T-tube are an effective management of the jaundice. Two patients in the series were successfully treated in this manner. On the other hand, if the obstructing lesion is fixed and unresectable, has significant fibrosis, is predisposed to repeated inflammation or might be a malignancy, the biliary obstruction should be treated by intestinal diversion, either a choledochoduodenostomy or choledochojejunostomy. Four patients in this series were managed successfully with intestinal diversion.

TABLE 3
COMMON CAUSES OF BENIGN OBSTRUCTIVE JAUNDICE

1. Stenosis of the sphincter of Oddi
2. Stricture of the common duct
3. Pancreatitis
4. Cholelithiasis
5. Choledocholithiasis
6. Biliary cyst
7. Hepatic calculi
8. Biliary cirrhosis

(Continued on page 431)

A. PHILIP DePAUW, M.D., JOSEPH MONTIE, M.D.
and GILBERT ROSS, JR., M.D., *Columbia*

Perinephric Abscess: The University of Missouri Experience

Case Report

THE PAST 50 YEARS have seen dramatic advances in the diagnostic armamentarium of the urologist. In spite of this, the patient with a perinephric abscess remains a perplexing problem. The diverse complaints and nonspecific physical findings challenge all clinicians and it is only a high index of suspicion that will lead to a correct diagnosis. We recently reviewed all the cases of perinephric abscess seen at the University of Missouri-Columbia Medical Center. The results of that review and a case report are presented to highlight this difficult clinical problem.

CASE REPORT

A 57-year-old woman was transferred to the University of Missouri Medical Center with an abscess on her right medial thigh. Two weeks previously, she noted the acute onset of right hip and thigh pain. Four days later, she was admitted to a local hospital with swelling of the right thigh and anasarca. Results of an upper gastrointestinal, barium enema and gall bladder series were normal. However, calcifications were noted in the area of the right kidney and bladder. An intravenous pyelogram (IVP) was not performed and the patient underwent an exploratory laparotomy during which a bladder calculus was removed. No other positive findings were noted. Postoperatively, the patient's condition deteriorated and she was transferred to the University Hospital on the fourth postoperative day.

On admission there, the patient was afebrile and normotensive, thin and in moderate distress with massive edema, ascites and decreased bowel sounds. There was a paramedian abdominal incision draining serosanguineous fluid and a 3 cm × 6 cm right thigh wound draining a foul smelling bloody discharge.

Results of pelvic and rectal examinations were normal.

Admission laboratory data included a hematocrit value of 41%; a white blood cell count (WBC) of 14,800/cu mm with a left shift; blood urea nitrogen value of 5 mg/100 ml; and serum creatinine level of 0.9. The urinalysis showed 10-15 WBC's per high power field; occasional red blood cells (RBC) and many bacteria; culture grew E. coli. Culture of the right thigh wound grew E. coli and citrobacter. The intravenous pyelogram (IVP) on admission showed a 6 cm × 2 cm calculus in the region of the right kidney but no excretion of contrast; the left kidney appeared normal. A right retrograde pyelogram redemonstrated the calculus, with extravasation of contrast material.

Subsequently, the patient underwent a right nephrectomy with the removal of a large renal calculus and a small fibrotic kidney. Cultures of the perinephric abscess taken intraoperatively grew E. coli and Proteus mirabilis. The abscess cavity extended from the bed of the right kidney retroperitoneally through the pelvis and obturator canal and drained in the medial right thigh. Multiple drains were placed. After a stormy hospital course including one month of hyperalimentation, she was discharged after a 73-day hospital stay and is doing well.

CLINICAL MATERIAL AND RESULTS

The case records of 33 patients with perinephric abscesses seen between 1956 and 1976 were reviewed in detail. Table 1 provides a profile of these patients. The average duration of symptoms was six weeks. Unfortunately, delay in the physician's diagnosis frequently exceeded this.

In *retrospect*, if one includes patients complaining of flank pain as well as those with irritative voiding complaints, hematuria, chronic

---

The challenge of the perinephric abscess remains unaltered by advances in diagnostic procedures or by an expanding array of new antimicrobials. The urinalysis and intravenous urogram remain the mainstay of diagnostic screening tests. Gallium scanning appears to be a useful addition, but it is too soon to know if CAT scanning will be helpful. Treatment patterns must be tailored to deal with these factors. The authors review the University of Missouri experience.

Dr. DePauw is Assistant Professor, Dr. Montie is Clinical Professor and Dr. Ross is Professor and Chief, Division of Urology, University of Missouri School of Medicine.

TABLE 1
PATIENT PROFILE

No. of patients		33
Male		13
Female		20
Age distribution		3-91 years
Duration of symptoms, avg.		6 weeks
Presenting complaints		
Flank pain	45%	
Abdominal pain	30%	
Irritative voiding compaints	24%	
Nausea and vomiting	21%	
Anorexia and malaise	18%	
Fever and chills	18%	
Fever (on admission)		75%
Diabetes		28%
Duration of hospitalization, avg.		35 days

TABLE 2
LABORATORY STUDIES

Pyuria	73%
Positive urine culture	79%
Positive blood culture	12%
Elevated serum creatinine (greater than 1.5)	32%
Leukocytosis	
Greater than 10,000	63%
Greater than 15,000	18%

TABLE 3

	% pts.
Urine cultures, positive	79
Proteus mirabilis	36
E. Coli	27
Staph. aureus	18
Klebsiella	12
Pseudomonas	6
Strep. fecalis	3
Urine cultures, no growth	21
Abscess cultures	
Not done	40
No growth	3
Correlated with urine culture	40
Different organism	17

TABLE 4
EXCRETORY UROGRAPHIC FINDINGS

Hydronephrosis	6/28	21%
Stone	10/28	36%
Non-function	15/28	54%
Mass	3/28	11%
Loss of psoas shadow	7/28	25%

TABLE 5
OPERATIVE PROCEDURES

Incision and drainage	8
Nephrostomy	8
Nephrectomy	
Initial	9
Secondary	4
No operation	8

catheter use and others, 79% of the patients had symptoms referable to the urinary tract. It is also important to note the very high incidence of diabetes mellitus in our group of patients (28%).

Table 2 illustrates that a careful urinalysis will help to suggest the urinary tract as a problem in most of these patients. Confirmatory urine culture is important. Leukocytosis is not always present; renal function is impaired in one third. Table 3 indicates both the high percentage of positive urine cultures and the predominance of gram negative organisms. When evaluated, abscess cultures usually correlated with urine culture.

As might be expected, the intravenous pyelogram was very helpful in localizing the patient's problem to the retroperitoneum. Fifteen percent of our patients did not have an IVP performed. In the remainder, however, there was an abnormality in all of them. The degree of abnormality was variable, ranging from moderate hydronephrosis to nonvisualization and from nonspecific to diagnostic changes. Thirty-six percent of the patients examined urographically had stone disease. Many had more than one abnormality (Table 4). In our series, 75% had evidence suggestive of urinary tract obstruction, manifest as either hydronephrosis or nonvisualization on IVP.

A variety of other x-ray procedures were performed on these patients. They included technetium scans, barium gastrointestinal studies and arteriography. Retrograde pyelography was the most generally useful study, although abnormal results from other radiographic procedures were encountered in some patients. Arteriography was helpful only to the extent that it removed neoplasia from diagnostic consideration. Ultrasonography and ^{67}Gallium scanning were not performed. The only pathognomonic x-ray finding, however, is the presence of gas in the perinephric space; in none of our patients were we able to detect this.

Surgical therapy was instituted in all patients for whom the diagnosis was made premortem (Table 5). The overall nephrectomy rate was 39%. Four secondary nephrectomies were required in the 16 patients in whom a drainage procedure was initially utilized. The overall mortality rate was 24%, reflecting the severity of the disease, the delay in diagnosis and the frequent failure of accurate diagnosis (only 45% in our series).

DISCUSSION

A perinephric abscess is a collection of pus in the perinephric fat lying between the true capsule of the kidney and the perirenal fascia. Early reports by Campbell[1] and Atcheson[2] attest to the difficulty in diagnosis and, despite the increasing sophistication of diagnostic measures, our ability to accurately diagnose these occult infections has not improved. ^{67}Gallium scans have recently been advocated as a diagnostic advance.[3] When taken in conjunction with a ^{99}Technetium glucoheptonate renal scan, they can be most helpful in localizing the problem. The technique does require a delay of six hours after the time of injection of the Gallium and does present problems in distinguishing an abscess from carcinoma or urinary obstruction. If the diagnosis is in doubt and the technique is available, however, this may be a valuable adjunct. The role of computerized axial tomography (CAT) scanning in perinephric abscess has yet to be defined. To date, there are no reviews of perinephric abscess that have included the use of CAT scanning. We have not personally used either CAT scanning or Gallium scanning in any of our patients.

Recent articles about perinephric abscess have stressed several factors.[4-6] There has been a change in the underlying etiology: metastatic seeding from a suppurative site such as a dermatologic infection is now less common than underlying urologic abnormalities such as stone disease or urinary obstruction. Reflecting the change in etiology has been a shift from predominantly Staph. aureus infections to mainly gram negative organisms such as E. coli and Proteus. Treatment patterns now more commonly include nephrectomy, emphasizing the degree of generalized parenchymal destruction that is often found. The mortality rate has remained unchanged despite newer diagnostic techniques and antibiotic advances. The reasons for this are obscure. Accurate preoperative diagnosis remains a dismal 50%.

It is important to stress that the majority of patients with a perinephric abscess will have symptoms suggestive of a flank or urinary infection and will have urinary findings reflecting that. The intravenous pyelogram, while not infallible, is an excellent screening test. It may not immediately suggest the diagnosis, but it will usually direct attention to the urinary tract. Further studies, including ^{67}Gallium scanning and, perhaps, CAT scanning as well as the more routine urologic tests (retrograde pyelography, arteriography, sonography and needle aspiration), can then be directed toward the renal unit and toward better diagnostic success.

REFERENCES

1. Campbell, M. F.: Perinephritic Abscess. Surg. Gynec. and Ohst. 51:674, 1930.

2. Atcheson, D. W.: Perinephric Abscess With a Review of 117 Cases. J. Urol. 46:201, 1941.

3. Hopkins, G. B., Hall, R. L., and Mende, C. W.: Gallium-67 Scintigraphy for Diagnosis and Localization of Perinephric Abscesses. J. Urol. 115:126, 1976.

4. Salvatierra, O., Jr., Bucklew, W. B. and Morrow, J. W.: Perinephric Abscess: A Report of 71 Cases. J. Urol. 98:296, 1967.

5. Malgieri, J. J., Kursch, E. D. and Persky, L.: The Changing Clinicopathologic Pattern of Abscesses in or Adjacent to the Kidney. J. Urol. 118:230, 1977.

6. Truesdale, B. H., Rous, S. N. and Nelson, R. P : Perinephric Abscess: A Review of 26 Cases. J. Urol. 118:910, 1977.

Benign Obstructive Jaundice

(Continued from page 428)

An alternative form of management of obstructive jaundice, which was used successfully in one patient, is sphincterotomy and T-tube drainage of the common duct. Thomas[2] reported a morbidity of 40% and an overall mortality of 5% to 8% for both transduodenal sphincterotomy and choledochoduodenostomy. The complications after sphincterotomy were perforation from a generous sphincterotomy and severe inflammation with fibrosis and recurrent jaundice from repetitive instrumentation. A sphincterotomy is at least as hazardous as intestinal diversion.

When the cause is obscure or the obstructive jaundice is likely to recur, we believe that intestinal diversion of the biliary tract is the procedure of choice for the following reasons:

1. It prevents recurrence of jaundice — recurrent inflammation or fibrosis will not obstruct the anastomosis.
2. It treats possible undiagnosed carcinoma in an effective manner, whether or not the primary is resected.
3. It eliminates the problems of recurrent gallstones or bile sludge and stenosis of the sphincter of Oddi.

Intestinal diversion is a reliable method of bile duct decompression and is recommended for benign obstructive jaundice whenever uncertainty about the cause or the future course of the biliary duct disease exists.

REFERENCES

1. Longmire, W. P., Jr.: The Diverse Causes of Biliary Obstruction and Their Remedies. Curr. Prob. Surg., Vol. XIV, No. 7, pp. 6, 7, and 29-36, July, 1977.

2. Thomas, C. G., Jr., Nicholson, C. P., and Owen, J.: Effectiveness of Choledochoduodenostomy and Transduodenal Sphincterotomy in the Treatment of Benign Obstruction of the Common Duct. Ann. Surg., 173:845, 1971.

CARL G. KARDINAL, M.D., *Columbia*

Current Concepts in Breast Cancer

Part IV. Approach to the Patient With Advanced Disease

CANCER will recur in half of all breast cancer patients. Management of such cases is a common problem in general medical practice. In fact, the most frequently diagnosed disease for patients admitted to the Internal Medicine Service at Ellis Fischel State Cancer Hospital (EFSCH) is metastatic breast cancer. Breast cancer is unique among the solid tumors since it is responsive to a variety of therapeutic modalities such as radiation therapy, hormonal manipulation and cytotoxic chemotherapy.

Even though the prognosis for the patient who has recurrent cancer is poor, a great deal can be done to improve the patient's quality of life and absolute survival. Recurrences resulting from metastatic breast cancer tend to follow five or six reasonably well defined patterns (Tables 1 and 2). Cancer will recur in the bone in 20% of the patients. In about 70% of these patients, the disease remains confined to the bone. In approximately 30% of patients, the disease will recur in a local soft tissue (skin and lymph node), but almost all of these patients will have disseminated disease within 36 months. An ipsilateral pleural effusion will be the first sign of recurrence in 15% of the patients and is commonly associated with local soft tissue recurrences. The initial recurrence will be pulmonary (nodular or lymphangitic) in 13%. Bone metastases will occur in half of the patients with pulmonary recurrence. In 20% of the patients the cancer will metastasize to the central nervous system (CNS). Recurrent disease will involve all major organs in 20% of the patients. These patients are the least responsive to therapy and have the poorest overall prognosis.

Local recurrence is recurrence in the operative incision, chest wall or supraclavicular nodes. Cancer will recur locally in 6% to 17.5% of the patients. In an analysis of 704 cases from the Ellis Fischel State Cancer Hospital, Donegan *et al*[2] (Table 3) show that the frequency of local recurrence is a function of two factors: lesion size and degree of axillary node involvement. Small primary lesions (< 2.0 cm) were associated with a 7.6% local recurrence rate while large lesions (> 6.0 cm) were associated with 30.6% local recurrence rate. Cancer recurred locally in 6.5% of patients in whom axillary node biopsies revealed no cancer and in 34.6% of patients in whom axillary node biopsies showed that four nodes contained cancer. Although local recurrences can usually be controlled by local treatment such as radiation therapy, the development of local recurrence is of ominous prognostic significance. In Donegan's series, almost half (46%) of patients in whom cancer recurred were dead in 12 months. Local recurrence is only a visual manifestation of systemic metastatic disease.

Prognosis is dire for patients with widespread metastatic disease or those with isolated involvement of the liver or CNS.[3] These cancers are refractory to therapy and the patients have me-

TABLE 1
CLINICAL PATTERNS OF RECURRENCE
(Modified From Smalley[1])

	Percent	*Disease-Free Interval*	*Survival From Mastectomy*
Pattern 1 — Bone only	19	14 months	48+ months
Pattern 2 — Local skin and node	30	12 months	36+ months
Pattern 3 — Ipsilateral pleural effusion	15	30 months	54+ months
Pattern 4 — Pulmonary — nodular or lymphangitic	13	30 months	39+ months
Pattern 5 — Widespread with involvement of all major organs	20	11 months	24 months
Pattern 5a — Liver only	3	36 months	—

TABLE 2
THE INCIDENCE (PERCENT) OF INDIVIDUAL ORGAN INVOLVEMENT FOR EACH OF THE FIVE PATTERNS OF RECURRENCE (Modified From Smalley[1])

	Bone	*Skin*	*Lung*	*Liver*	*CNS*	*Opposite Breast*
Pattern 1 — Bone	100	10	10	10	7	2
Pattern 2 — Local skin	43	100	7	7	10	5
Pattern 3 — Ipsi-effusion	30	75	10	5	5	0
Pattern 4 — Pulmonary	47	18	100	5	20	2
Pattern 5 — Widespread	84	50	63	89	20	28
Pattern 5a — Liver only	10	10	10	100	10	0

lian survivals in the range of four to six months. Therefore, the site of involvement as well as the number of sites involved strongly influences not only response to therapy but, also, survival (Table 4).

The interval between mastectomy and the development of recurrence, the disease-free interval, is one of the most important prognostic indicators. The greater the disease-free interval, the greater the survival after the development of dissemination (Table 5). There appears to be a direct relationship between the duration of the disease-free interval and the response to hormonal manipulation, the implication being that patients with a prolonged disease-free interval have a slower growing, more highly differentiated tumor that retains its hormonal responsiveness. One would expect that these tumors retain specific hormone receptors. Conversely, Carter[4] reported an inverse relationship between disease-free interval and response to cytotoxic chemotherapy. More rapidly growing tumors in patients with disease-free intervals of less than two years have a significantly greater response to chemotherapy than do tumors in patients who have a disease-free interval of more than two years. More rapidly growing tumors apparently have a higher growth fraction (i.e., cells actively dividing and synthesizing DNA) and an enhanced susceptibility to cytotoxic drugs.

The importance of tissue documentation of the first suspected metastatic lesion cannot be overemphasized. Defects indicated in liver or bone scans are seldom pathognomonic and malignancy is by no means the only cause of a pleural effusion. Because of the prognostic implications and the psychologic impact, a diagnosis of metastasis must be made with absolute certainty.

Hormonal Therapy of Advanced Breast Cancer

Certain metastatic breast cancers respond to hormone treatment. Use of hormonal therapy is advantageous because it is relatively nontoxic and the responses may be of long duration. On a random basis, however, only one third of all cancers

TABLE 3
LOCAL RECURRENCE IN 704 CASES AT EFSCH

Overall	17.5%
Primary <2.0 CM	7.6%
>6.0 CM	30.6%
Axillary nodes negative	6.5%
>4 positive nodes	34.6%
12 Month survival	54.0%

From Donegan *et al*, 1966.[2]

TABLE 4
THE EFFECT OF THE NUMBER OF METASTATIC SITES ON SURVIVAL
(Modified From Cutler *et al*, 1969[3])

Number of Sites	*Number of Cases*	*Median Survival*
1	249	19 months
2*	200	13 months
3*	114	10 months
4*	51	6 months
"Dire"	111	6 months

"Dire" = Liver, peritoneum, brain or spinal cord metastases.
* Does not include a "dire" prognosis site.

TABLE 5
THE EFFECT OF DISEASE-FREE INTERVAL ON SURVIVAL AFTER DISSEMINATION
(Modified From Cutler *et al*, 1969[3])

Disease-Free Interval	*Number of Cases*	*Median Survival After Dissemination*
<1 year	135	7 months
1-2 years	142	7 months
2-5 years	208	15 months
5+ years	129	25 months

TABLE 6
OBJECTIVE METASTATIC BREAST TUMOR REGRESSION TO ENDOCRINE THERAPY ACCORDING TO ESTROGEN RECEPTOR (ER) ASSAY

	ER+	*ER−*
Ablative Therapy		
Oophorectomy	65%	0.3%
Hypophysectomy	64%	0%
Adrenalectomy	53%	9.0%
Additive Therapy		
Estrogen	63%	4.0%
Glucocorticoid	47%	0%
Androgen	36%	9.0%
Antiestrogen		
Tamoxifen	70%	0%

Modified from McGuire[5] and Wittliff.[6]

will respond to hormonal therapy. Hormonally responsive breast tumors contain specific hormonal receptors for estrogen (ER).[5] According to Wittliff,[6] approximately 50% of breast carcinomas contain estrogen receptors (ER+). Also, the frequency of ER+ tumors increases with the age of the patient. If the tumor tissue is ER+, approximately two thirds will respond to endocrine treatment. If estrogen receptors are absent (ER−), the tumor is hormonally autonomous and will not respond to additive or ablative therapy. Table 6 is a compilation of reported response data based upon estrogen receptor status. An estrogen receptor assay should be performed on every tumor at the time of the initial surgery. This may be of considerable assistance in future therapeutic decisions. ER assays also can be performed on metastatic lesions if suitable tissues are available.

There is a definite difference in hormonal responsiveness by dominant site of metastatic disease.[7] Skin and soft tissue recurrences are most responsive, bone is of intermediate responsiveness, and visceral dominant disease is the least responsive (Table 7). Metastatic disease to liver is only minimally hormonally responsive, and CNS metastases are unresponsive.

There is a sequential approach to the hormonal therapy of metastatic breast cancer (Table 8). Some cancers may respond to primary hormonal manipulation, then to secondary forms of hormonal treatment and, occasionally, even to tertiary attempts at endocrine therapy. The best predictor of a primary hormonal response is the estrogen receptor assay, but the best predictor of a secondary response is an objective response to

TABLE 7
COMPILED RESPONSE DATA FOR ADDITIVE HORMONAL THERAPY IN POSTMENOPAUSAL WOMEN*

	Overall	*Soft Tissue*	*Bone*	*Viscera*†	Duration
Estrogens (Diethylstilbesterol, 5 mg tid)	36%	40%	25%	35%	18 months
Androgens (Fluoxymesterone, 10 mg tid)	21%	20%	25%	15%	12 months
Progestins (Megestrol Acetate, 40 mg qid)	25%	32%	27%	20%	12 months
Corticosteroids (Prednisone, 10 mg qid)	18%	—	—	—	3 months
Antiestrogens (Tamoxifen, 10 mg bid)	38%	—	—	—	10 months

* Based upon pre-ER data.
† Does not include liver or CNS.
Modified from Kennedy.[6]

TABLE 8
PRIMARY AND SECONDARY ENDOCRINE THERAPY ACCORDING TO MENOPAUSAL STATUS

	Primary	*Secondary*
Premenopausal	Oophorectomy	Adrenalectomy (or hypophysectomy) Androgens Antiestrogens
Postmenopausal	Estrogens Androgens (bone predominate)	Estrogens (bone predominate) Progestins Adrenalectomy (or hypophysectomy) Antiestrogens
Perimenopausal	Combined oophorectomy-adrenalectomy	Androgens Progestins Antiestrogens

primary hormonal treatment. If the disease fails to respond to primary endocrine treatment, the likelihood of its responding to further attempts at hormonal manipulation is nil.

Oophorectomy remains the primary endocrine treatment of choice for premenopausal women.[7] Additive therapy with estrogens or androgens is the therapy of choice for clearly postmenopausal women (appropriate dosage in Table 7). The group of women who had their last menstrual periods from one to five years before consideration of treatment, the perimenopausal group, presents a more difficult problem. Cancers in these women are often hormonally unresponsive and documentation of ER status is of utmost importance. If the tumor is ER+, an attempt to determine the woman's menopausal status should be made. The estrogen effect in vaginal mucosal cells is not a very sensitive test. Probably, the best test of menopausal status is urinary gonadotropin (FSH) levels. If the FSH levels are very high, the disease should be treated like that in any postmenopausal patient. If the FSH levels are indeterminant, a combined oophorectomy-adrenalectomy may be indicated.

It must be emphasized that any form of hormonal therapy for breast cancer may require up to two months to achieve maximal effectiveness. There are two important corollaries to this statement: (1) patients with chronic or indolent disease with primarily bone or cutaneous involvement may be denied a useful response by too short a therapeutic trial and (2) patients with rapidly progressive disease, especially those patients with visceral involvement, should be treated directly with cytotoxic chemotherapy because of the more rapid onset of response.

Estrogens

In postmenopausal women, the administration of large doses of estrogens gives the highest response rate and most prolonged remissions of all of the hormonal therapies.[7] Under most circumstances, estrogens are the primary hormonal therapy of choice for postmenopausal women. Responses may occur also in inoperable primary tumors. The overall random response rate of cancers in postmenopausal women to estrogens is 36%, but response increases with the patient's age and postmenopause years. The overall response rate for ER+ tumors is 63%. In general, the median duration of response to estrogen is approximately 18 months but responses of more than five years have been well documented.

This is the final segment of a four-part, comprehensive review of the current concepts of breast cancer.

The series deals with risk factors in the development of breast cancer, etiologic considerations, the relative prognosis of the various histologic types of breast cancer, prognostic factors, the mammography controversy, controversies in the primary therapy of breast cancer and the management of the patient with advanced disease. The following outline provides an overall view of this work:

Part I

Epidemiologic Considerations in Breast Cancer in Women and Men

Part II

Pathologic Considerations and Early Diagnosis

Part III

Staging, Primary Therapy and Adjuvant Chemotherapy

Part IV

Approach to the Patient with Advanced Disease

Dr. Kardinal is Director of Internal Medicine, Ellis Fischel State Cancer Hospital and Cancer Research Center. This investigation was supported in part by Clinical Cancer Education Grant CA-17946 from the National Cancer Institute, Department of Health, Education and Welfare.

The most commonly used estrogen is diethylstilbesterol (DES) in the oral dosage of 5 mg three times daily. Nausea is the most common of the early side effects of DES. This may be avoided by increasing the dosage in a stepwise fashion, i.e. starting with 5 mg daily for five to seven days, then increasing to 5 mg twice daily for an additional five to seven days, and then to the full dosage of 5 mg three times daily. About one third of the patients may retain fluid which may aggravate or even precipitate congestive heart failure. Forty percent of the postmenopausal women receiving estrogen therapy have breakthrough or withdrawal bleeding. This is usually of little clinical significance and responds to cessation of treatment or abates spontaneously with continued therapy. If bleeding persists, however, the woman may need dilation and curettage. Therapy with estrogens, androgens or progestins may cause an induced hypercalcemia or a symptomatic "flare-up" in patients who have metastatic disease to bone. These reactions indicate hormonal responsiveness. Additive therapy can be continued or the patient might be considered for an ablative procedure.

When disease responds to estrogen therapy it will also respond to the sudden withdrawal of estrogens *(estrogen rebound response)* in up to 25% of patients. If there is a rebound response, patients have had a longer disease-free interval before primary estrogen therapy. The duration of this response is usually brief, but Nestro *et al*[8] reported a median duration of 18 months in their series.

Androgens

Androgens are of palliative value for both premenopausal and postmenopausal women with disseminated disease. However, because of the greater chances of palliation which can be expected from castration, androgens remain of secondary importance in treatment of premenopausal patients.[7] The response of osseous metastases to androgens is equivalent to the response to estrogens, but the response rate of soft tissue and visceral metastases to androgens is significantly less than that reported for estrogens. Because of the inferior response rate of visceral and soft tissue lesions, metastatic bone disease should be considered the only indication for the use of androgens.

There are desirable subjective, hematopoietic and anabolic effects of androgens. Androgens stimulate erythropoiesis, possibly via erythropoietin or by a direct marrow-stimulating effect.[7] Patients whose disease is treated with androgens may experience an increased sense of well being, pain relief, increased appetite and weight gain. It is not unusual to observe continued progression of disease in spite of excellent symptomatic improvement. Because of these desirable secondary effects and the equivalent objective response rate, androgens are the primary hormonal treatment of choice for postmenopausal women with metastatic disease limited to bone.

Fluoxymesterone (Halotestin) has emerged as the androgen of choice since it is at least as potent as testosterone propionate, it is less virilizing, and it can be taken orally. The usual dosage is 10 mg twice or three times daily.

Progestins

Progestational agents are of established value in treating advanced breast cancer, yielding an objective response rate of 20% to 30% in cancers in postmenopausal patients.[9] Progestins are most commonly used as a secondary agent after estrogens. Because of their minimal side effects, however, Ansfield *et al*[9] are evaluating megestrol acetate as the initial hormonal trial in disease in postmenopausal women. The progestational agent in most common use is megestrol acetate (Megace). The oral dosage is 40 mg four times a day.

Antiestrogens

Tamoxifen antagonizes the action of estrogen by two mechanisms.[10, 11] It competes with estradiol for estrogen receptors (ER) in the cytoplasm of target tissues and appears to have a stronger affinity for the binding sites. The second mechanism of action is an inhibition of ER synthesis. As is apparent by the mechanism of action, antiestrogens are active only in ER+ tumors.

Clinical trials have demonstrated an overall objective response rate of 38% (26 of 68) for tamoxifen. Response durations have been from two to 36 months, with the majority of responses in the range of ten-plus months. These response data are equivalent to those reported for other modes of hormonal therapy. Responses are equally distributed among soft tissue, visceral and skeletal diseases. Although responses in cancers in premenopausal women have been documented, most of the women whose disease responded to the antiestrogens have been more than five years postmenopause. This may reflect the larger number of ER+ tumors in older patients. The recommended dosage schedule for tamoxifen is 10 mg twice daily. The side effects include menstrual irregularities, vaginal bleeding and hot flashes as would be anticipated by the antiestrogenic activity. Tumor "flares" may also occur with increased skin erythema and increased bone pain. As with DES or androgens, these may not suggest a poor prognosis for the patient but, rather, they may herald a response of the tumor to the drug. Tamoxifen causes thrombocytopenia in about 10% of the patients.

The exact role that antiestrogens will come to play is unknown at this time. They are useful as a secondary agent to treat cancers in postmenopausal patients after their diseases have become active again, following a prior response of the cancers to estrogens or androgens. They may be useful in treating disease in premenopausal women as well. Hormone antagonists may ultimately replace ablative surgical procedures.

Chemotherapy of Advanced Breast Cancer

Metastatic breast cancer is responsive to all major classes of cytotoxic drugs: the alkylating agents, the antimetabolites, the vinca alkaloids and the antitumor antibiotics (Table 9).[12-14] Cyclophosphamide (Cytoxan) and L-phenylalanine

TABLE 9
SINGLE AGENT CHEMOTHERAPY OF ADVANCED BREAST CANCER

	Response Rate (%)	Median Response Duration (Months)
Alkylating Agents		
Cyclophosphamide	34	7
Phenylalanine Mustard	22	3
Antitumor Antibiotics		
Adriamycin	40	7
Mitomycin C	38	3
Antimetabolites		
5-Fluorouracil	26	7
Methotrexate	34	8
Vinca Alkaloids		
Vincristine	21	3
Vinblastine	20	—

mustard (L-PAM, Melphalan, Alkeran) are the alkylating agents in most common use. 5-Fluorouracil (5-FU) is the most commonly used nonhormonal agent in breast cancer. Based upon the enhanced response rates and response durations of tumors to combination chemotherapy, however, the use of 5-FU as a single agent for the treatment of metastatic breast cancer can no longer be justified. Methotrexate is one of the most active agents in breast cancer. Vincristine and vinblastine are equally active, but vincristine is usually incorporated into combination regimens since it is not significantly myelosuppressive. Adriamycin is the most active single agent with 43% of the cancers responding in previously untreated patients and 28% in patients treated previously with chemotherapy. Mitomycin C is active in breast cancer, but no more active than other agents that are significantly less toxic. However, it is beginning to play an increasing role in cancers that are refractory to other chemotherapeutic agents.

Breast cancer is uniquely suited for combination chemotherapy since it is responsive to all major classes of cytotoxic drugs with their differing mechanisms of actions and toxicities. In 1969, Cooper[15] reported an objective response rate of 88% (53 of 60 patients) in hormone-resistant cancers with the use of the given drug combination CMFVP (C = cyclophosphamide, M = methotrexate, F = 5-fluorouracil, V = vincristine, P = prednisone). In larger series, the actual response rate to the original Cooper regimen seems to be 50% to 60%. Regardless, this represented a major advance over single agent therapy. Over the next several years, multiple variants of the original five-drug program were analyzed, including different dosage regimens for CMFVP, CMFV, CFVP, CMFP, CFP, FVP, CMV, CMP and CMF. Several studies have demonstrated that the most active component of the Cooper regimen is CMF and that this three-drug combination will yield essentially the same response as the five-drug CMFVP program but with less toxicity.

TABLE 10
RESPONSE TO ADRIAMYCIN COMBINATIONS IN ADVANCED BREAST CANCER

Regimen	Response Rate (%)	Median Response Duration (Months)
AV	58	4+
AM	38	—
AC	80	10
AMV	48	—
CAF	68	10+

A = adriamycin, V = vincristine, M = methotrexate, C = cyclophosphamide, F = 5-fluorouracil.

Multiple adriamycin combinations are currently being evaluated, but it is too early to tell if their use will be clearly advantageous over the Cooper regimen variants. Two- and three-drug adriamycin combinations are illustrated in Table 10.[16] Four-, five-, and even six-drug combinations are under investigation. In general, the objective response rates are in the 50% to 60% range. The 80% response rate reported by Jones *et al*[17] for the two-drug combination of adriamycin and cyclophosphamide needs to be verified in a larger series. Although adriamycin combinations may become the primary treatment of choice for metastatic breast cancer, as yet their use is not clearly advantageous when it is compared to the Cooper regimen variants. Further randomized studies are needed.

As has been discussed, there is a differential responsiveness to endocrine therapy by site of dominant metastatic disease. Differential responsiveness to chemotherapy is similar. The responses of soft tissue cancers that recur, i.e., skin and lymph nodes, are clearly superior; the mean response to all regimens is 59%. The responsiveness of visceral lesions is 40%, but only 22% for osseous metastases.[18]

Patient Management

A modified radical mastectomy is the primary treatment of choice for stage I and II disease.

Based upon the presence or absence of axillary node involvement, one may categorize patients as being at high or low risks of having recurrent disease. Currently available data suggest that premenopausal patients who have axillary node involvement will benefit from long-term adjuvant chemotherapy. Results of treatments with adjuvant chemotherapy in postmenopausal women remain investigational.

If a patient has recurrent cancer, she can then be stratified as to her estrogen receptor status. Until further characteristics of hormone responsiveness have been evaluated, it is probably most important to know if the patient is ER−. The chance of the cancer's responding to hormonal manipulation in ER− is less than 10%. Therefore, these patients should directly receive cytotoxic chemotherapy. The ER− patient should not be subjected to an ablative procedure and rarely, if ever, receive additive hormonal therapy.

Concurrent chemotherapy and endocrine therapy are under evaluation. Conceptually, these combinations may have an additive effect. To date, however, the advantage has not been clear.

The physician is frequently confronted with the problem of recurrent breast cancer with ER status unknown. If tumor tissue is accessible, it can be evaluated for ER at the time of the recurrence, but adequate tissue is frequently not available. The decision about treatment must then be made on clinical grounds. If the metastatic disease appears after a disease-free interval of more than two years and if it is slow growing and involves a nonvital structure such as skin, soft tissue, bone or lung in a nodular form, the patient has a reasonable chance because the disease may respond to hormonal therapy. If the patient has a life-threatening disease such as lymphagitic pulmonary metastases, liver involvement or disease at multiple sites, or if the patient has had a disease-free interval of fewer than two years, the chance of the cancer's responding to hormonal therapy is minimal. In the presence of life threatening disease, patients initially should receive cytotoxic chemotherapy even if ER+ because the onset of action is more rapid than with hormonal therapy. If these patients' cancers respond to chemotherapy, hormonal manipulation may then be considered.

FUTURE PROSPECTS

It does appear that the estrogen receptor (ER assay may be of greater value than just being predictive of hormonal responsiveness. Preliminary data from McGuire[19] have demonstrated that patients whose tumors are ER+ have a bette overall prognosis than the ER− group. Preliminary unverified data suggest that ER− lesions are more responsive to cytotoxic chemotherapy.[20]

Also, the current goals of therapy are not only to improve survival, but to strive to make patients not only disease-free but intact.[21] Although this will require controlled studies, it appears that we are ready to move further ahead in a rational, careful manner.

REFERENCES

1. Smalley, R. V.: Five Clinical Patterns of Recurrence of Cancer of the Breast. Proc. Am. Assoc. Cancer Res. Am. Soc. Clin. Oncol. 17:172, 1976 (Abst. #685).

2. Donegan, W. L., Perez-Mesa, C. M. and Watson, F. R.: A Biostatistical Study of Locally Recurrent Breast Carcinoma. Surg. Gynecol. Obstet. 122:529-540, 1966.

3. Cutler, S. J., Asire, A. J. and Taylor, S. G.: Classification of Patients with Disseminated Cancer of the Breast. Cancer 24:861-869, 1969.

4. Carter, S. K.: Single and Combination Nonhormonal Chemotherapy in Breast Cancer. Cancer 30:1543-1555, 1972.

5. McGuire, W. L.: Current Status of Estrogen Receptors in Human Breast Cancer. Cancer 36:638, 1975.

6. Wittliff, J. L.: Specific Receptors of the Steroid Hormones in Breast Cancer. Semin. Oncol. 1:109, 1974.

7. Kennedy, B. J.: Hormonal Therapies in Breast Cancer. Semin. Oncol. 1:119, 1974.

8. Nesto, R. W., Cady, B., Oberfield, R. A., Pazianos, A. G. and Salzman, F. A.: Rebound Response After Estrogen Therapy for Metastatic Breast Cancer. Cancer 38:1834-1837, 1976.

9. Ansfield, F. J., Davis, H. L. Jr., Ramirez, G., Davis, T. E., Borden. E. C., Johnson, R. O. and Bryan, G. T.: Further Clinical Studies with Megestrol Acetate in Advanced Breast Cancer. Cancer 38:53-55, 1976.

10. Ward, H. W. C.: Anti-oestrogen Therapy for Breast Cancer. A Trial of Tamoxifen at Two Dose Levels. Brit. Med. J. 1:13-14, 1973.

11. Carbone, P. P.: Antiestrogens and Breast Cancer Treatment. Ann. Intern. Med. 83:730-731, 1975.

12. Carter, S. K.: The Chemical Therapy of Breast Cancer. Semin. Oncol. 1:131, 1974.

13. Carter, S. K.: Integration of Chemotherapy into Combined Modality Treatment of Solid Tumors. VII. Adenocarcinoma of the Breast. Cancer Treat. Rev. 3:141-174, 1976.

14. Broder, L. E. and Tormey, D. C.: Combination Chemotherapy of Carcinoma of the Breast. Cancer Treat. Rev. 1:183-203, 1974.

15. Cooper, R.: Combination Chemotherapy in Hormone Resistant Breast Cancer. Proc. Am. Assoc. Cancer Res. 10:15, 1969 (Abst.).

16. Tormey, D. C.: Adriamycin (NSC-123127) in Breast Cancer: An Overview of Studies. Cancer Chemother. Rep. 6:319-327, 1975.

17. Jones, S. E., Durie, B. G. M. and Salmon, S. E.: Combination Chemotherapy with Adriamycin and Cyclophosphamide for Advanced Breast Cancer. Cancer 36:90-97, 1975.

18. Kardinal, C. G.: Chemotherapy. *In* Cancer of the Breast, Donegan, W. L. and Spratt, J. S. Jr. (eds.). Philadelphia, W. B. Saunders, 1979.

19. McGuire, W. L.: Hormone Receptors: Their Role in Predicting Prognosis and Response to Endocrine Therapy. Semin. Oncol. 5:428-433, 1978.

20. Lippman, M. E., Allegra, J. C., Thompson, E. B., *et al:* The Relation Between Estrogen Receptors and Response Rate to Cytotoxic Chemotherapy in Metastatic Breast Cancer. N. Engl. J. Med. 298:1223-1228, 1978.

21. Henny, J. E. and DeVita, V. T.: Future Prospectives in the Treatment of Breast Cancer. Semin. Oncol. 5:465-468, 1978.

Reprints: Carl G. Kardinal, M.D.
Ellis Fischel State Cancer Hospital
115 Business Loop 70 West
Columbia, Mo. 65201

"Without your help . . . I simply would not have made it through medical school"

(The following letter was received from a physician who, as a student, received financial assistance from the Missouri State Medical Association members who have contributed to the Missouri State Medical Foundation. It is printed with his permission.)

Dear Doctor:

"Thank you very much for your thoughtful letter concerning receipt of my final payment on my medical student loan.

"I can well remember the feeling of destitution associated with being a reasonably good student but lacking funds with which to enroll for the next semester in medical school. Having always been, perhaps, more than adequately endowed with pride, it was a lesson in discipline and humility to go seeking financial assistance. However, the effort brought me in contact with some very nice people who really do a lot to keep one's faith in human nature alive.

"I sincerely appreciate the efforts which you and others put into the Missouri State Medical Foundation and all other student loan funds. You should feel a quiet heroism for the assistance you lend to needy students . . . without your help, I simply would not have made it through medical school."

The Missouri State Medical Foundation—MSMF—was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

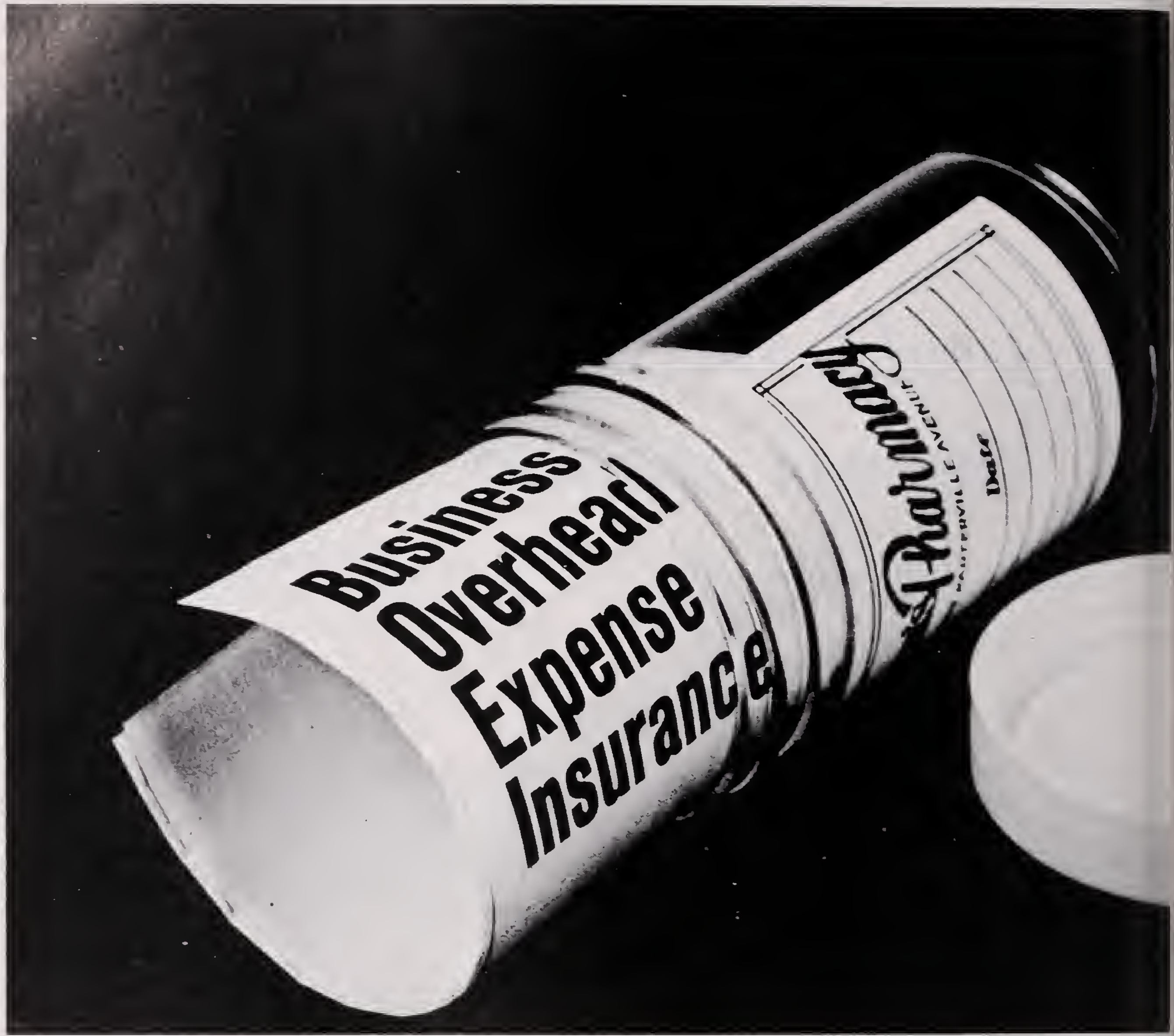
Send a Check Today to MSMF!

MISSOURI STATE MEDICAL FOUNDATION

113 Madison St., Jefferson City, Missouri 65102

• SPONSORED BY THE MISSOURI STATE MEDICAL ASSOCIATION •

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 501(c)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.



A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

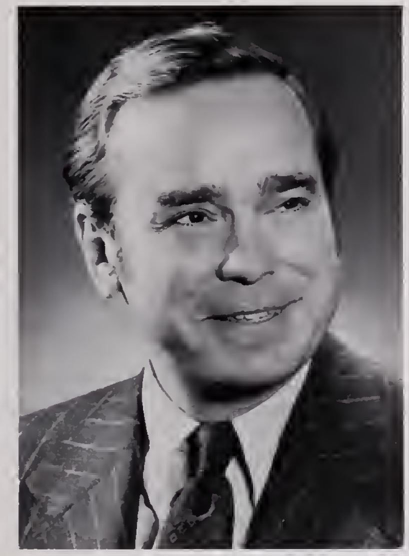
James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

President's Message

Much of the business of the MSMA is conducted in response to requests by members who introduce resolutions in the House of Delegates or who meet with their district councilors and express their concerns. Each councilor reports for his or her district at the five or six meetings of the Executive Council throughout the year. If comments are not made to the councilor, they will not be reported for the benefit of the rest of the members.



Andrew McCanse, M.D.

With the recent gasoline shortage in the metropolitan areas of Missouri, there is a need for physicians to plan for their professional travel in the future. There have been reports about the possibility of gas rationing, but none of the national political figures is openly calling for it. At the same time, the price controls on gasoline are being removed very gradually, and there seems to be little chance that the cost of gasoline will keep Missourians from using all of the available supply.

With the odd-even license plate numbering system used in some states to limit purchase to certain days, there are still lines at many service stations on both coasts. Minimum purchase requirements exist in some parts of Missouri so the driver cannot keep "topping off" his tank.

The Executive Council of the MSMA will welcome suggestions from the membership on what steps should be taken to assure physicians of the necessary gasoline to meet their patient-care responsibilities. Some areas have a distinctive sticker for doctors' cars which identifies them and supposedly allows service station managers to put them at the head of the line. There are problems with this system, not the least of which are the feelings created when you do move ahead of other drivers. Should we let the medical societies in the metropolitan areas deal with the problem or should there be a statewide effort to meet this need? Will a letter to the governor suffice or should there be some attempt at standby legislation to be used in the event of severe emergency shortages?

Another energy-related physician concern is related to the opening of the first nuclear electrical generating plant in Callaway County in the early 1980s. How should the MSMA plan to become involved in facing the possibility of a serious accident which may require evacuation of residents in the general area of the plant? Again, is a letter to the governor adequate? Or should the Association use the committee or commission process to begin consideration of such an event?

I hope that all of our members will give these matters some thought and that these thoughts will be transmitted to our councilors or officers in order that they may do a better job in helping to serve the Association.

Count
On . . . CommuniCare T.M. REG.

Financial,
Marketing and Management Services
For Professional, Business, and Personal Needs

In Your Community . . .
Caring the Most . . .
About Doing The Best . . .
For You.

WM. K. HALLIBURTON
GLENN W. KELLEY
Managing Associates

11147 OLIVE STREET
ST. LOUIS, MO. 63141
(314) 432-3008

SERVING YOU IN MISSOURI

MUNNS
MEDICAL
SUPPLY

9202 Barton, Overland Park, Ks. 66214
913-492-5820

FOUNDED 1924
AUXILIARY TO THE MISSOURI STATE MEDICAL ASSN.

MSMA Auxiliary

> *"The man who does things makes many mistakes, but he never makes the biggest mistake of all — doing nothing."* —
> Benjamin Franklin

COMMUNICATION (noun)

Communication is one of the most important exchanges we can have in our Auxiliary.

This quiet noun has a technique for helping and influencing others. Effective communication teaches us to be attentive listeners and informed conversants.

Every physician can become acquainted with the Auxiliary and take a serious look from the standpoint of its rewards for his or her spouse.

Use the one-to-one contact. Sometimes this comes in the form of a smile or a wave of a hand. Use the telephone: talk to each other. Respond to mail immediately. It means so much to the one who is waiting for an answer or some information.

Within the community, every physician's wife represents the medical profession. She has the opportunity to reach deeply into the community with her influence, which enables her to promote a positive image of medicine. This is COMMUNICATION.

Mrs. Rudy Ruhling
President

No matter how small an idea you may have, use it, share it and pass it along. Please share your ideas with one another. Sometimes it takes more than one and "We Can Do More Together."

THEY WON'T DO BUSINESS WITH YOU

WHEN THERE'S A DEBT IN THE FAMILY.

It's true. People are embarrassed to approach you when they or a close relative owe you money. You can't afford that. Let I.C. System help. This approved collection service clears up bad debts and thus eases embarrassing situations in an ethical, efficient and effective manner. Always with an eye toward maintaining good will for you in the community. Mail this coupon today to learn how . . .

The System Works

I. C. COLLECTION SERVICE
Missouri State Medical Association
Post Office Box 1028
Jefferson City, Missouri 65102

Name ____________________
Address ____________________
City ____________________
State ____________________ Zip ____________
Signature ____________________

Uniform Collection Service Approved for Missouri State Medical Association

Members of the Missouri State Medical Association now have a uniform collection system approved for their use. It employs the latest techniques available, consistent with all requirements and provisions of the increasingly strict laws governing collection practices. The official announcement letter to members outlined the program, but it did not go into the particular qualifications of the company chosen to serve the membership: I. C. System, Inc.

I. C. System, Inc. has been in the collection business since 1938. It now serves the members of close to 1,000 state business and professional associations all across the country. During 1978, the company collected an all-time record of $28.8 million in past-due accounts.

All collection practices, procedures and materials used by I. C. System have been scrutinized by the Federal Trade Commission. So without reservation, all members can be assured that the company is fully aware of what can and cannot be done on behalf of its clients. Also, in view of I. C. System's preeminence in size and prestige within the industry, members can be assured that they are in no danger of legal action resulting from collection activities carried out on their behalf. That is particularly important in this age of consumerism.

A few short years ago, the most important consideration in selecting a collection service was in determining its ability and willingness to turn over to the creditor all the money he had coming to him. Today, such selection equally emphasizes the importance of entrusting the doctor's good name and reputation to the collection service . . . a heavy responsibility.

Keeping pace with the increases in collections over the years has been the development of improved processing and customer service departments in the I. C. System's home office. The company has a modern, tailor-made data processing system from Control Data and IBM. For the benefit of those familiar with computer systems, theirs is an on-line Control Data Omega 480 with an IBM 3211 printer serving IBM 3270 cathode ray tube terminals. This system is backed up by automatic typewriters, microfilm equipment and a complete in-house printing and mailing capability. For those not familiar with such equipment, it simply means that company growth hinders neither their effectiveness nor their ability to respond immediately to customer needs and inquiries.

The company maintains a staff of Customer Relations personnel whose job it is to see that all customer inquiries are handed on "right now" basis. For those situations in which the mail cannot carry information fast enough, the creditor can telephone the company via its toll free WATS line system.

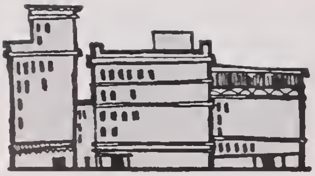
Borrowing from the experience of users in other states, members of the Missouri State Medical Association who install the system should submit nine or more accounts immediately. Even if it is necessary to go back a year or more to come up with that many bad checks or written-off accounts, it is well worth the effort. You can't expect as high a percentage of collections on the very old accounts, but the initial heavy use will get your bookkeeper accustomed to working with the service and, thus, less likely to forget to submit future accounts as they become 60 or 90 days past due. A company representative will be happy to spend some time with your bookkeeper to start things off on the right foot.

Those members who did not return the inquiry card enclosed with the original announcement letter can arrange to see a representative at a later date by simply contacting the Association office.

For MSMA Impaired Physician Program Assistance,

Call 314-636-5744

24-Hour Telephone Answering Service. Calls Are Confidential.



NEWS
From the Medical Schools

UNIVERSITY OF MISSOURI-COLUMBIA

To honor *Dr. William M. Hart* upon his retirement as Roy E. Mason Distinguished Professor of Ophthalmology and chairman of the department, the School of Medicine and continuing education office will present a program on "Recent Advances in Clinical Ophthalmology" on August 25.

Visiting guest speaker will be *Kenneth C. Swan*, M.D., recently retired professor and chairman of ophthalmology at the University of Oregon Medical School, in whose laboratory at the University of Iowa Dr. Hart began his career in ophthalmology nearly 40 years ago.

From there, Dr. Hart went to the National Institutes of Health where he was first director of eye research at the Neurological Diseases and Blindness Institute. He later founded the Eye Research Foundation of Bethesda, Md. and directed its activities until he came to the University of Missouri in 1967.

Dr. Hart was a member of the Editorial Board of MISSOURI MEDICINE at the time of his retirement.

The day-long program honoring Dr. Hart will be held at the Alumni Center and includes a luncheon. Representatives from other medical schools will participate as well as Missouri colleagues who will report on current work being done here in ophthalmology.

Dr. Don H. Blount, an administrator at the National Institutes of Health (NIH) Heart, Lung and Blood Division, has been appointed dean of the Graduate School and vice-provost for research at the School of Medicine.

Dr. Blount earned a master's degree in physiology and pharmacology in 1956 and a doctorate in physiology in 1958 at the University of Missouri. Since 1969, he has been deputy associate director of cardiology and chief of the cardiac functions branch of the NIH division. He administers $163 million in grants and projects there and will bring extensive knowledge of research funding to the university.

Karl D. Nolph, M.D., director of the Division of Nephrology and professor of medicine, was the invited guest lecturer at the annual meeting of the European Dialysis and Transplant Association from June 17-20 in Amsterdam, Netherlands. H spoke at this meeting of approximately 2,500 rena specialists on new developments in peritonea dialysis. Most of the lecture concerned clinica research at the University of Missouri Medica Center, primarily in the Clinical Research Cen ter, and basic studies of peritoneal transport an peritoneal physiology being carried out at th Dalton Research Center under the direction o *Dr. Frederick Miller*.

During his stay in the Netherlands, Dr. Nolph received a personal invitation from Her Majesty Queen Julianna of the Netherlands, to visit th palace and meet with her. The Queen asked Dr Nolph many questions about his peritonea dialysis research.

While in Europe, Dr. Nolph was invited b many other medical centers to lecture on th peritoneal dialysis research at the University o Missouri. He accepted invitations to speak at th Liverpool Medical Institution, the Newcastl University Medical School and the London Roya Free Hospital during a tour of England. In Germany, he spoke at the Freie University of Berlin and at the Barmbex Hospital in Hamburg.

Dr. Nolph also toured the new Internationa Congress Center at Berlin where the Second International Symposium on Peritoneal Dialysis will be held in June of 1981. He is the North American representative for this group and executive secretary of the organization.

WASHINGTON UNIVERSITY

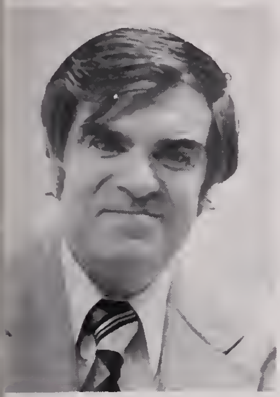
The School of Medicine has received a five-year grant totaling $700,000 from the National Institutes of Health to participate in a 23-hospital study of sickle cell disease.

Harold Zarkowsky, M.D., associate professor of pediatrics, is the principal investigator. He is currently screening newborns at the Jewish Hospital of St. Louis, Barnes and City Hospitals to identify 100 children with sickle cell disease to participate in the St. Louis study.

The study will emphasize and provide preventive medical care for participants. However, it is an information-getting project and will not involve evaluation of treatments.

T. LOUIS UNIVERSITY

Alberto Galofré, M.D., M.Ed., has been ap- ointed assistant dean for curriculum, a new position at the School of Medicine. Dr. Galofré is also an assistant professor of internal medicine and director of the Division of Medical Education in the Department of Internal Medicine.



Dr. Galofré

Medical schools, Dr. Galofré said, must now respond to the increased knowledge in already established fields as well as newer reas of pressure on the curriculum such as nutri- ion, bioethics, geriatrics and human sexuality. Iis objectives include promoting fairness in the valuation of students and implementing estab- ished knowledge about educational technology.

A native of Chile, Dr. Galofré received his I.D. degree from the University of Chile in San- iago in 1962 and his master's degree in education rom the University of Illinois in 1974. He is a ediatrician who has done research on fundamen- al DNA biochemistry and the biochemical as- ects of malnutrition.

Manuel R. Comas, M.D., has been appointed ssociate dean for students. Dr. Comas also holds he position of associate professor of gynecology nd obstetrics and has served as assistant dean for tudents at the school since 1975.

Alice Dean Kitchen, M.D., has been appointed lirector of psychiatric consultation and liaison for he Medical Center. Dr. Kitchen, who is also an ssistant professor of psychiatry, will become the irst full-time director of psychiatric consultation nd liaison for the medical center and will focus on atient care, education and research.

The Department of Hospital and Health Care dministration at the Medical Center has been warded a $123,750 grant from the U. S. Public Iealth Service, Department of Health, Educa- ion and Welfare for program expansion. New ourses, faculty and equipment will be added to he department, which recently was incorporated nto the medical center's new Center for Health ervices Education and Research. The depart- nent also received a $55,440 HEW grant that will rovide financial assistance to graduate students.

Robert M. Donati, M.D., director of the Division of Nuclear Medicine, has been appointed chief-of-staff for the St. Louis Veterans Administration Medical Center. Prior to this new appointment, Dr. Donati served as chief of nuclear medicine for the VA medical center.

Dr. Donati

Dr. Donati has been responsible for establishing the first nuclear medicine computer network for multiple VA hospital use in the Missouri area. He serves as a medical research program specialist in nuclear medicine radiation for the VA, Washington, D. C. and as a consultant to the Armed Forces Radiobiology Research Institute, also in Washington.

Joseph V. Jones, M.D. and *Douglas C. Heimberger*, M.D. received awards as outstanding members of St. Louis University Hospitals' house staff.

(Continued)

Like to Speculate?

Take a chance on losing over half your assets with an unplanned or poorly planned estate!

Little or no effort required.

CommuniCare T.M REG.

Financial,
Marketing and Management Services
For Professional, Business, and Personal Needs

WM. K. HALLIBURTON
GLENN W. KELLEY
Managing Associates

11147 OLIVE STREET
ST. LOUIS, MO. 63141
(314) 432-3008

Dr. Jones accepted the Dr. Ralph Kinsella Award as the most outstanding resident on the house staff. This award is given annually to the resident or residents who best portray the qualities of the late Dr. Ralph Kinsella, former director emeritus of the hospitals' Department of Internal Medicine.

Dr. Heimburger received the Upjohn Achievement Award, given annually by the Upjohn Pharmaceutical Co. in recognition to an intern for an outstanding contribution to medicine.

UNIVERSITY OF MISSOURI-KANSAS CITY

A group of medical students spent the month of June in Canada and the Northeastern United States on another in a series of student/faculty study tours.

The concept of such tours was initiated by *Provost E. Grey Dimond* a few years ago. It is based on the fact that since the students are in a six-year curriculum which goes year-round, they miss the opportunity for travel which many students enjoy during their undergraduate years. The objectives of these trips have been to study the history and social conditions of the area, its cultural and educational opportunities with particular emphasi on medical education and health care deliver systems. Since this program was started, th School of Medicine has sent students to rura areas of Missouri and to the Navajo Nation China, Israel and Greece.

This group of students visited McMaster University in Hamilton, Ontario; Canadian Healt System officials in Toronto; and medical schools a Laval University in Quebec and McGill in Montreal, the University of Vermont and Dartmout College. The final visit was to Harvard Medica School. The group attended Medical Gran Rounds at the Peter Bent Brigham Hospital an returned to Kansas City, June 30.

Dean Harry S. Jonas has announced the addition of the following three new faculty members:

Dr. Ute W. Rosa joined the faculty as docen and assistant professor on July 1. Dr. Rosa received her M.D. at Universidad Federal do Ri Grande do Sul, Porto Alegre, RS, Brazil in 1968 She completed a fellowship in Pulmonary Medicine at St. Louis University in 1978. Dr. Rosa i board certified in internal medicine and in pulmonary medicine.

Dr. Leslie E. Tucker also joined the faculty a docent and assistant professor in July. Dr. Tucke received his M.D. degree at the University o Missouri-Columbia in 1973 and completed hi residency in internal medicine at St. John's Merc Medical Center in St. Louis in 1977. He completed a Fellowship in Gastroenterology at th Scott and White Clinic in Temple, Tex. in 1979.

Robert M. Kretzschmar, M.D., has been appointed chairman of the Department of Obstetrics and Gynecology at Truman Medical Center the major teaching hospital of the School of Medicine. Formerly chief of the Gynecology Divisio and associate professor, Dr. Kretzschmar is th recipient of the Bronze Medal of the America Cancer Society and the Central Association Priz Award for "Evolution of the Gynecology Teachin Association: An Education Specialist." His area o research interests are programmed instructiona development, application of audiovisual teachin systems for undergraduate medical students i obstetrics and gynecology and development o human sexuality courses for undergraduate medical students.

Dr. David J. Moffatt has been named chairma of the Department of Anatomy. He was a membe of the faculty of anatomy, University of Iowa College of Medicine.

FOR BETTER SERVICE

Call (314) 895-7777
or toll-free 800-392-8768
for Blue Shield
claims information

To contact your
Professional Relations
Representative on
professional matters
call 895-7566 or 895-7557

Saint Louis
Blue Shield
A COMMUNITY SERVICE

CLIP AND SAVE

MAKE NO MISTAKE . . . . .

YOUR INSURANCE COMPANY IS GOING

TO COLLECT ENOUGH PREMIUMS TO COVER

ALL CLAIMS . . . . . .

. . . . . . AND COMMISSIONS (Usually 15%)

. . . . . . AND LEGAL EXPENSE (Who knows how much?)

. . . . . . AND GENERAL EXPENSE (Usually 30%)

. . . . . . AND SOME PROFIT (Who knows how much?)

Medical Defense Associates, Ltd.

Collects only for Claims

. . . . . . And All Other Expenses Must Not Consume

More Than 8% of Written Premium Assessments.

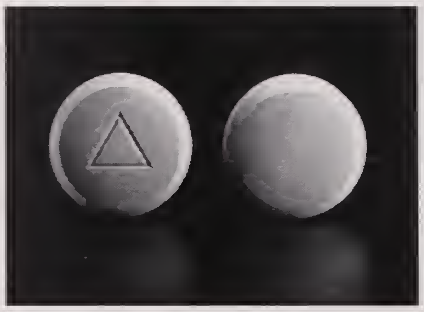
For Low Rates Call Toll Free 1-800-492-7212

MEDICAL DEFENSE ASSOCIATES, LTD.
Suite 117B 1031 E. Battlefield
Springfield, MO 65807

Toll Free Telephone 1-800-492-7212

The Maker

Examining a Few Myths About Prescribing.



Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand–name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were not bioequivalent to a reference product. As know, there is substan literature on this subj affecting many drugs, cluding such antibiot as tetracycline and er thromycin. The recor drug recalls and cour actions affirms strong that there are differen among pharmaceutic companies and their products. Research-intensive companies have far better record than those that do no search and may pract minimum quality ass ance.

MYTH: Industry favors only "expensive" brand names and denigrates a generics.

FACT: PMA companie make 90 to 95 percent the drug supply, inclu ing, therefore, most of generics. Drug nomen clature is not the impo tant point; it's the com tence of the manufacturer and the integrity the product that count

Matters.

I: Generic options al-
s always exist.

C: About 55 percent
escription drug ex-
iture is for single-
ie drugs. This
a s, of course, that for
5 percent of such
nditure, is a generic
sribing option avail-
e

I: Generic
s iptions are filled with
nsive generics, thus
i consumers large
of money.

C: Market data show
t ou invariably
sribe—and pharma-
s dispense—both
il and generically
e d products from
n and trusted
es, in the best inter-
c patients. In most
e the patient receives
r en brand product.
gs from voluntary
ndated generic
sribing are grossly
erated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

PMA

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

New Members

Suraj P. Ahuja, M.D., Baptist Memorial Hospital, 6601 Rockhill Rd., Kansas City 64131, has become a member of Jackson County Medical Society. Dr. Ahuja is a native of Lahore, Pakistan, received his preliminary education at Nagpur University and his M.D. degree at Nagpur Medical College in 1956. He specializes in cardiology.

Salomon Alfie, M.D., 202 Broadway Medical Bldg., 4400 Broadway, Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Alfie is a native of Buenos Aires, received his preliminary education at M. Belgrano College and his M.D. degree at Buenos Aires Medical School in 1957. He specializes in child psychiatry.

William J. Braun, M.D., Children's Mercy Hospital, 24th at Gillham Rd., Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Braun is a native of Kansas City, received his preliminary education at the University of Notre Dame and his M.D. degree at the University of Missouri-Kansas City in 1974. He specializes in pediatrics.

Lawrence D. Furlong, Jr., M.D., 114 Carondelet Medical Bldg., 1010 Carondelet, Kansas City 64114, has become a member of Jackson County Medical Society. Dr. Furlong is a native of Springfield, received his preliminary education at the College of St. Thomas and his M.D. degree at the University of Arkansas in 1971. He specializes in diagnostic radiology.

Elwyn M. Grimes, M.D., Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Grimes is a native of Bogue Chitto, Miss., received his preliminary education at Jackson State University and his M.D. degree at Meharry Medical College in 1968. He specializes in obstetrics and gynecology.

George Heinz, M.D., 1900 S. National, Springfield 65804, has become a member of Greene County Medical Society. Dr. Heinz is a native of Oceanside, N. Y., received his preliminary education at Albion College and his M.D. degree at the University of Illinois in 1973. He specializes in internal medicine.

Thomas S. Helling, M.D., 722 Medical Plaza, 4320 Wornall, Kansas City 64111, has become a member of Jackson County Medical Society. D Helling is a native of Kansas City, received h preliminary education at the University of Kansa and his M.D. degree at the University of Kansa in 1973. He specializes in surgery.

Violet B. Matovich, M.D., University of Missouri School of Medicine, 2411 Holmes, Kansa City 64108, has become a member of Jackso County Medical Society. Dr. Matovich is a nati of South Bend, Ind., received her preliminar education at Indiana University and her M.D degree at Indiana University in 1956. She specializes in neurology.

Benjamin E. Medley, M.D., 114 Carondele Medical Bldg., 1010 Carondelet, Kansas Cit 64114, has become a member of Jackson Count Medical Society. Dr. Medley is a native c Abilene, Tex., received his preliminary educatio at Tulane University and his M.D. degree a Tulane University in 1969. He specializes in diagnostic radiology.

Robert Michaels, M.D., 1900 S. National Springfield 65804, has become a member c Greene County Medical Society. Dr. Michaels i a native of Allentown, Pa., received his preliminary education at Indiana University and hi M.D. degree at Indiana University in 1970. H specializes in ophthalmology.

Thomas L. Terry, M.D., Truman Medica Center East, Little Blue and Lee's Summit, Kansas City 64139, has become a member of Jackso County Medical Society. Dr. Terry is a native c Nathalie, Va., received his preliminary educatio at the University of Virginia and his M.D. degre at Case Western University in 1973. He specializes in cardiology.

Yang Ho Kim, M.D., 800 East 5th, Suite 105 Washington 63090, has become a member c Franklin County Medical Society. Dr. Kim is native of Korea, received his preliminary education at Seoul National University and his M.D degree at Seoul National University in 1957. H specializes in obstetrics and gynecology.

Muhammad S. Zia, M.D., Western Missour Mental Health Center, 600 E. 22nd, Kansas Cit 64108, has become a member of Jackson Count Medical Society. Dr. Zia is a native of Pakistan received his preliminary education at Government College and his M.D. degree at King Edward Medical School in Pakistan in 1970. H specializes in psychiatry.

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

niversity of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society

Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

ept. 28-29	The Long Weekend: Management of Patients With Critical Illness
ov. 1-3	Annual Fall Clinical Conference — Kansas City Southwest Clinical Society
ec. 6-8	The Heart 1979

'ashington University School of Medicine

Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
***Contact:* Loretta Giacoletto**

ov. 9-11	Sixth Annual Symposium: Anesthesia and the Geriatric Patient
(1980)	
lay 3-11	Second Annual Current Concepts in Musculoskeletal Radiology and Orthopedics Meeting

lenorah Medical Center

4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
***Contact:* Erich W. Pollak, M.D., F.A.C.S., Director of Surgical Education**

very Wed. Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds
irst & Third aturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds

ansas City Society of Ophthalmology and Otolaryngology

30306 Gillham Rd., Kansas City 64108
(816) 531-8432
***Contact:* Ron Cosens, Executive Director**

ec. 6-7	Annual Clinical Meeting (Hilton Plaza Inn)

Ed Bixby Institute for Postgraduate Education

Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4167

Oct. 3	Sports Medicine and Fitness Concepts
Dec. 5	Current Management of Diabetes Mellitus
(1980)	
Feb. 6	Carcinoma of the Breast: Update 1980
Apr. 2	Present Status of Antibiotic Therapy
June 4	Chronic Obstructive Pulmonary Disease
Aug. 6	Rheumatic Heart Disease

University of Missouri School of Medicine Office of Continuing Education

M-233 Medical Center, Columbia 65212
(314) 882-2256
***Contact:* William D. Bradshaw, M.D.**

Sept. 14-16	Mid-Continent Psychiatric Association 31st Meeting (Tan-Tar-A, Lake Ozark)
Sept. 15	Mini Melanoma Symposium
Sept. 20-21	Infection Control
Oct. 12-13	Basic Neurology
Oct. 26-27	Advances in Rheumatology
Nov. 16-17	M.D. Day
Nov. 30-Dec. 1	Advances in Trauma (Crown Center Hotel, Kansas City)
Nov. 30-Dec. 2	Group Relations in Health Care (Breech Training Academy, Overland Park, Kan.)
(1980)	
Feb. 17-21	Oncological Problems (Tamarron, Durango, CO)
Feb. 28-19	Nutritional Update
Mar. 5	Preceptor's Day
Mar. 6-7	Family Practice Update
Mar. 13-14	Medicine and Religion
Mar. 20-21	Spring Surgery Conference
Mar. 31-Apr. 1	26th Annual Urology Seminar (Crown Center, Kansas City)
Apr. 9-10	Primary Pediatrics for the Primary Physician
Apr. 18-20	Group Relations
Aug. 10-11	Third Annual Workshop in Soft Tissue Surgery

(Continued on next page)

Mercy-Baptist Eye Seminars
615 S. New Ballas Rd., St. Louis 63141
Contact: Richard B. Oglesby, M.D.

Oct. 21	Ninth Eye Seminar: New Techniques in Ophthalmology

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 454-2291
Contact: Ronald G. Evens, M.D., Director

Sept. 10	Eighth Annual Wendell C. Scott Lecture — Mr. Harold E. Thayer, Chai man of the Board, Barnes Hospital

City-Wide Radiology Conferences

Oct. 8	Noninvasive Evaluation of the Caroti Artery by Ultrasound
Nov. 12	Skeletal Lesion With a Fibrous Matre
Dec. 10	Hepatobiliary Imaging With ^{99m}T HIDA
(1980)	
Jan. 14	Conference at St. Louis University
Feb. 11	Pediatric Radiology
Mar. 10	CT of the Thorax-Updated
May 12	Parenchymal Liver Disease — Evalu tion With Computed Tomography

In Memoriam

Carl J. Althaus, M.D., 15225 Isle View, Ballwin 63011; a graduate of St. Louis University, 1917; member of St. Louis Metropolitan Medical Society; age 86; died June 12, 1979.

Vincent Houston, M.D., 7820 Carondelet, St Louis 63105; a graduate of Creighton Universit Medical School, 1942; member of St. Louis Met ropolitan Medical Society; age 63; died June 1 1979.

Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
Since 1899
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

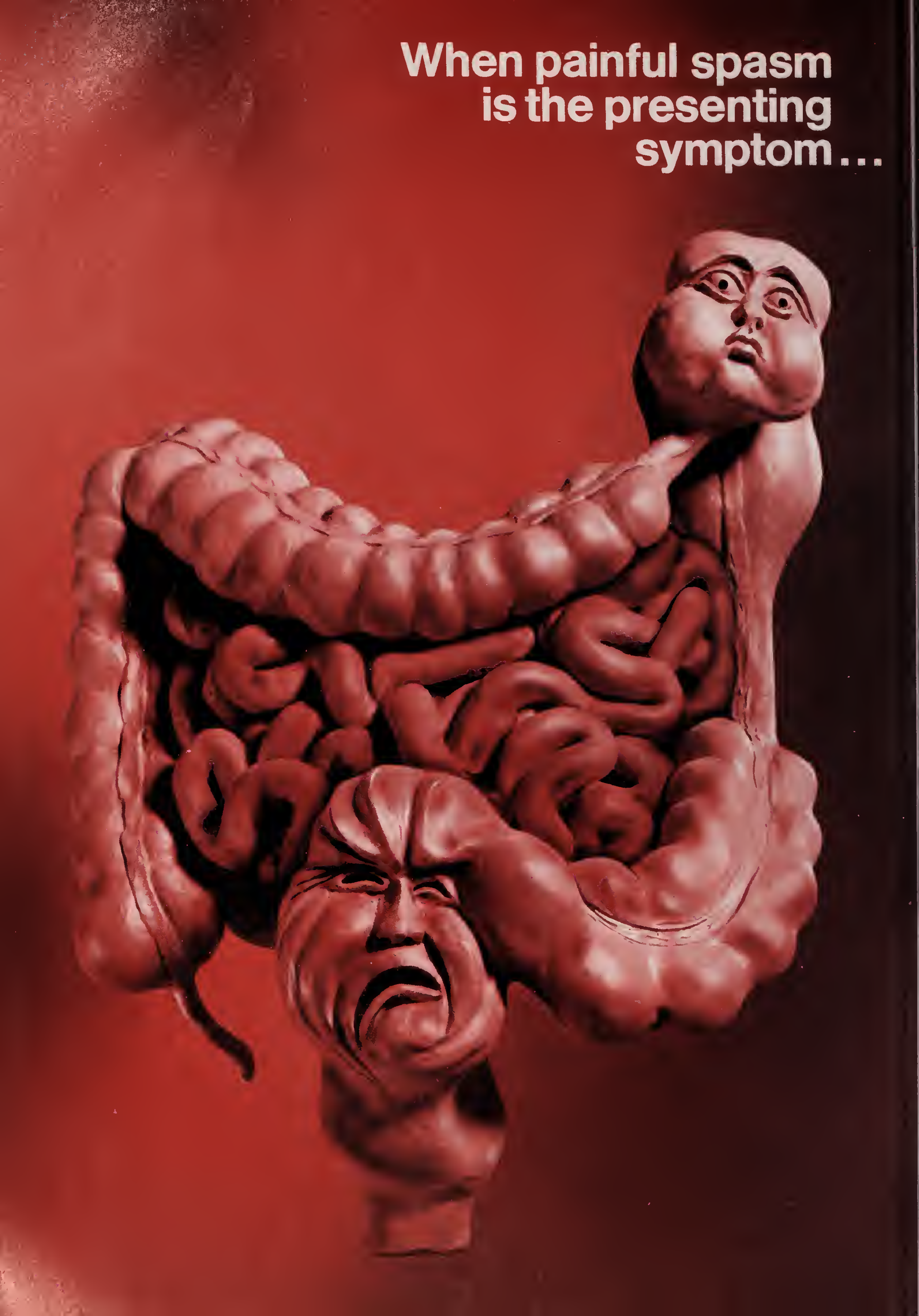
EASTERN MISSOURI OFFICE: Ralph E. Borgmann and Philip E. Moppert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
Suite 202-A, 6600 W. 95th Street, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

2 ml.=300 mg.
Tagamet
(cimetidine HCl
300 mg.
cimetidine/2 ml
NDC 0108-5022-01
Tagamet HCl Injection
cimetidine hydrochloride
SK&F LAB CO.
Tagamet
brand of cimetidine
Tablets
100 tablets
NDC 0108-5013-20
SK&F LAB CO., Caroline, P.R. 00630
Subsidiary of SmithKline Corporation
SKF T13

Tagamet®
brand of
cimetidine

How Supplied:
Pale green 300 mg. tablets
in bottles of 100 and Single Unit Packages of 100
(intended for institutional use only).
Injection, 300 mg./2 ml.,
in single-dose vials
and in 8 ml. multiple-dose vials,
both in packages of 10.

SK&F LAB CO.
a SmithKline company


When painful spasm is the presenting symptom . . .

in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

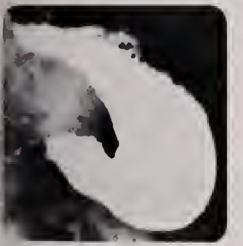
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

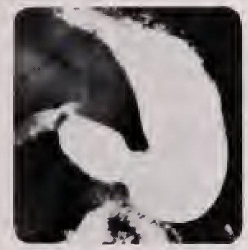
Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-4420 (Y736A) MNR 804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS
Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness, dizziness, insomnia, nausea, vomiting, impotence; suppression of lactation, constipation, bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally focal irritation. DOSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg. capsule and syrup: *Adults* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children* 1 capsule or teaspoonful syrup three or four times daily. *Infants* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults*. 1 tablet three or four times daily. Bentyl Injection. *Adults*: 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Merrell

MERRELL NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215, U.S.A

MEDICAL EQUIPMENT SERVICE

- factory authorized and trained service men
- repairs or adjustments in office
- loaners available for most major equipment
- midwest's most complete sales and service center

G-N

The GOETZE-NIEMER Co.

Kansas City 816-231-1900
St. Joseph 816-279-0804
Joplin 417-624-1040
Springfield 417-865-6511

serving the midwest since 1884

INDEX TO ADVERTISERS

They Help Make Missouri Medicine *Possible*

eltone Electronics	415
urroughs Wellcome	Insert (418-419)
ommuniCare	442, 447
oetz-Niemer	456
C. Collection Service	444
red S. James & Co. of Missouri, Inc.	440
li Lilly & Company	420
ead Johnson Pharmaceutical Division	Insert (426-427)
edical Defense Associates, Ltd.	449
edical Protective Company	454
Merck Sharp & Dohme	414
Merrell-National Laboratories	414, Insert (414-415), Insert (454-455), 455, 456
MOMEDICO	410
Munns Medical Supply	442
Ortho Pharmaceutical Corp.	Insert (418-419), 419
Pharmaceutical Manufacturers Association	450 & 451
Roche Laboratories	411, 459, 460
Saint Louis Blue Shield	448
Smith Kline & French	Insert (454-455)
The Upjohn Company	Insert (414-415)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

ACATION HOME — Tan-Tar-A Estates, Lake Ozark, Mo. n golf course. 3 BR, 2½ Ba, A/C, fully equipped kitchen, /D, Sleeps 12. Ideal large family or four couples. All sport cilities available. Seasonable rates. F. A. O'Connell, .D., 7830 State Line, Shawnee Mission, Kan. 66208. (913) 81-0886.

ANTED: OLD X-RAY VIEW BOX — Write to H. Neal rannemann, M.D., 1000 West 10th, Rolla, Mo. 65401.

EMPLOYMENT OPPORTUNITIES — The Division of Vocational Rehabilitation — Department of Elementary and Secondary Education, is accepting applications for medical consultants to work in the Division central and district offices. Applicants must have a license to practice medicine in the state of Missouri. Consultants may be employed from two hours to 32 hours per week, as needed. Inquiries should be directed to either William H. Keith, Assistant Commissioner for Vocational Rehabilitation, 3523 North Ten Mile Drive, Jefferson City, Missouri 65101 — Telephone (314) 751-3251; or Donald Fishback, Office of Administration, Division of Purchasing, State Capitol Building, Jefferson City, Missouri 65102 — Telephone (314) 751-4204.

PLACE IN THE COUNTRY — Leisure time or investment property, wooded or open farm land, 30 to 1,000 acres. We have the land to suit you. We are in the country specializing in Country Real Estate. Oakleigh Real Estate, Bellflower, Mo. 63333. Phone (314) 929-3637.

ST. LOUIS: EMERGENCY MEDICINE — Work available Monday-Friday days only; full time or part time; paid professional liability; flexible schedule; Missouri license required. Call PPG's Laury Kamp at 314-878-2280.

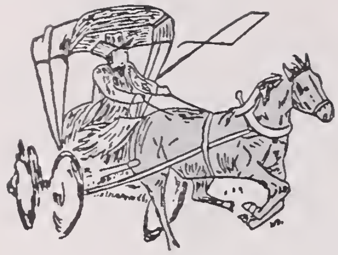
CALL 314-636-5744 — For MSMA Impaired Physician Assistance Program. 24-hour answering Service. Calls are confidential.

Give now to your student loan fund!

Send A Generous Contribution To

MISSOURI STATE MEDICAL FOUNDATION

P.O. Box 1028, Jefferson City, Missouri 65102



Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

James R. McVay, M.D., Kansas City, describes the following:

"One year after the founding of the City of St. Louis by Pierre Laclede Liquest in 1764, there came the Frenchman, Dr. Andre Conde. While post surgeon, he carried on private practice and to him goes the honor of being the first physician in St. Louis and the state.

"The first American-born physician to settle in St. Louis was Dr. Bernard G. Farrar, who is remembered as 'The Father of the Medical Profession in St. Louis.' He came to the city in 1809 and was the first president of the Medical Society of the State of Missouri.

"This society was formed in 1837, antedating by ten years the formation of the American Medical Association. It actually was local in character, however, and the Missouri State Medical Association was formed in 1850.

"In 1822, the firing of a shotgun brought everlasting scientific prominence to the wounded man, Alexis Saint Martin. An opening into his stomach, the result of this wound, enabled Dr. William Beaumont to study for the first time the actual digestion of foods.

"In 1848, there was graduated from the Medical Department of the University of Missouri, then located in St. Louis, Dr. John Thompson Hodgen. Later as dean of the faculty of the Missouri Medical College, as president of the American Medical Association and as president of the Missouri State Medical Association, he exerted a profound influence on the medical teachings of his time. He was an ingenious surgeon and the Hodgen splint for the treatment of fractures of the femur survives to this day.

"In 1889, Augustus C. Bernays performed the first gallstone operation done in Missouri. His brilliant surgical writings as well as his teachings at the Marion-Sims College of Medicine gave hi an international surgical reputation. The Medic Department of the University of Missouri at C lumbia was established as an integral part of th University in 1973."

TWENTY-FIVE YEARS AGO

Roland S. Kieffer, M.D., St. Louis, said th following in his address to the Pettis Coun Medical Society on March 17:

"Herodotus, in his 'Account of Egypt,' writte nearly 500 years BC, said of the Egyptians, 'Th art of medicine among them is distributed thu each physician is a physician of one disease and no more; and the whole country is full of ph sicians, for some profess themselves to be ph sicians of the eyes, others of the head, others the teeth, others of the affections of the stomac and others of more obscure ailments.'

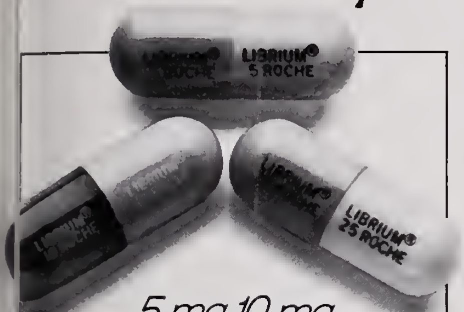
"You and I know that specialism today is mo necessary than ever, as a result of the vastly i creased total aggregates of medical knowledg and skills, making it physically impossible for a one man to properly qualify himself to be a med cal 'all things to all men.'"

TEN YEARS AGO

After serving six two-year terms as mayor Paris, Mo., Dr. F. A. Barnett was not a candidat for reelection on April 1. This announcement ap peared in the *Moberly Monitor-Index* and *Eve ning Democrat* in a feature story describing man community projects accomplished during D Barnett's terms of office.

Dr. William C. Allen, Columbia, was one seven alumni to be honored at the 23rd Annu Founders Day and Alumni Award Convocation Central Methodist College in Fayette in March

Librium®
chlordiazepoxide HCl/Roche



5 mg, 10 mg, 25 mg capsules

- ☐ Proven antianxiety performance
- ☐ An unsurpassed safety record
- ☐ Predictable patient response
- ☐ Minimal effect on mental acuity at recommended doses
- ☐ Minimal interference with many primary medications, such as antacids, anticholinergics, diuretics, cardiac glycosides and antihypertensive agents

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. Oral—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

synonymous
with relief of anxiety

ROCHE

Roche Products Inc.
Manati, Puerto Rico 00701

Please see following page.

College of Physicians o
Philadelphia
19 South 22nd St.
Philadel ia, PA 19103

Librium® CIV
chlordiazepoxide HCl/Roche
5 mg, 10 mg, 25 mg capsules

ROCHE

synonymous with relief of anxiet

Please see preceding page for a summary of product informati

Missouri Medicine

Vol. 76, No. 8-X (ISSN 0026-6620) Aug. 15, 1979

Annual Directory

1979-1980 MEMBERSHIP ROSTER

Officers
AMA Delegates
The Council
Committees
Commissions
Members

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
SEP 7 1979

Missouri
State
Medical
Association
and
Auxiliary

Contents • Page 462

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Rae W. Froelich, M.D., Lebanon
George Bohigian, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
  Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
  Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
  Richard H. Fallon, M.D., St. Louis
  James M. Stokes, M.D., St. Louis
  J. Otto Lottes, M.D., St. Louis
  Theodore L. Paletta, M.D., St. Louis
  Frederick D. Peterson, M.D., St. Louis
  Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
  Vice-Councilor, Paul H. Rother, M.D., St. Charles
5th District, H. Peter Ekern, M.D., Mexico
  Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
  Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
  Donald McIntosh, M.D., Kansas City
  Ronald A. Youmans, M.D., Kansas City
  Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
  Marvin A. Singleton, M.D., Joplin
  Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
  Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
  Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Contents

MSMA Officers 46
MSMA Committees and Commissions ... 46
Component Medical Societies, Officers ... 46
Guide to Component Medical Societies .. 47
Councilor Districts 47
Roster of Members, Alphabetical 47
Roster of Members by Component Society 50
List of Designated Specialty Codes 55
MSMA Auxiliary Officers 55
Roster of Auxiliary Members 56
MSMA Policy Manual 56
Missouri Voluntary Health Agencies,
  Organizations 57

How to Use This Roster

This Roster issue includes two lists of members of the Missouri State Medical Association as of June 1, 1979.

The **ALPHABETICAL ROSTER** on **PAGE 473** includes each member's component society name and **number.** A list of component society code numbers appears on page 463.

In the **COMPONENT SOCIETY ROSTER** on **PAGE 506**, the primary specialty appears after the member's name and address. **County societies are listed by code numbers in numerical order.** See page 557 for explanation of specialty codes.

The **Roster for the Missouri State Medical Association AUXILIARY,** beginning on page 558, lists the officers, directors, committee chairmen, presidents of county auxiliaries, districts, state past-presidents and members of each county auxiliary.

For other departments, please refer to the table of contents above.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

ode Numbers

r Component Medical Societies

umerical Order)

ode	Component Society	Page
10	Andrew	506
14	Audrain	506
18	Barton	506
26	Boone	506
30	Buchanan	509
34	Butler-Wayne-Ripley-Carter	510
38	Callaway	510
42	Cape Girardeau	511
46	Chariton-Macon-Monroe-Randolph	511
50	Clay	512
54	Clinton	513
58	Cole	513
62	Cooper	514
66	Dallas-Hickory-Polk-Dade	514
70	Dunklin	514
74	Franklin-Gasconade-Warren	514
78	Grand River (Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb Counties)	514
82	Greene	515
86	Henry	518
94	Howard	518
98	Jackson	518
02	Jasper	529
06	Jefferson	530
10	Johnson	530
15	Laclede	530
18	Lafayette-Ray	530
20	Lake of the Ozarks (Camden-Miller-Morgan Counties)	530
22	Lewis-Clark-Scotland	531
26	St. Charles-Lincoln	531
30	Marion-Ralls-Shelby	531
38	Mineral Area (St. Francois-Iron-Madison-Washington-Reynolds-Bollinger Counties)	532
42	Moniteau	532
46	Montgomery	532
58	Northwest (Nodaway-Holt-Atchison-Gentry-Worth Counties)	532
62	North Central (Adair-Schuyler-Knox-Sullivan-Putnam Counties)	532
66	Ozarks (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald Counties)	532
70	Pemiscot	533
74	Perry-Ste. Genevieve	533
78	Pettis	533
82	Mid-Missouri (Phelps-Crawford-Dent-Pulaski-Maries Counties)	533
86	Pike	534
88	Platte	534
90	St. Louis Metropolitan	534
98	Saline	555
02	SEMO (Stoddard-New Madrid-Mississippi-Scott Counties)	556
06	South Central (Howell-Oregon-Texas-Wright-Douglas-Ozark-Counties)	556
10	Webster	556
4	West Central (Bates-Cass-Cedar-St Clair-Vernon Counties)	556

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D., Columbia
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
F. Thomas Ott, M.D., St. Louis
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

1979-1980 OFFICERS

Andrew McCanse
President

Richard V. Bradley
President-Elect

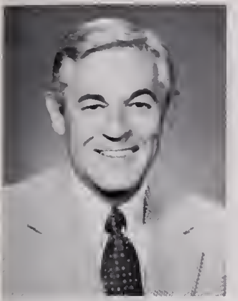
Missouri State Medical Association

Wilfred E. Wooldridge
Editor

Purpose of Association

THE PURPOSE of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.

Officers



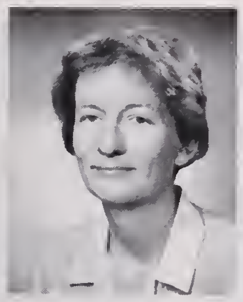
John N. Martin
Immediate Past-President

Milton B. Ozar
Vice-President

Mary J. Merideth
Vice-President

C. G. Stauffacher
Vice-President

John I. Matthews
Secretary



Carol F. Williams
Treasurer

Edwin K. Burford, Jr.
Speaker

Jay L. Meyer
Vice-Speaker

AMA Delegates

Melvin C. Kasten
(1978-1979, 1980-1981)

Francis X. Lieb
(1979-1980)

Rae W. Froelich
(1979-1980)

Robert A. Slickman
(1978-1979, 1980-1981)

Alternate Delegates

Vernon Balster
(1980-1981)

George Bohigian
(1979-1980)

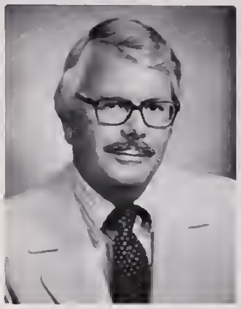
Hugh E. Stephenson, Jr.
(1979-1980, 1980-1981)

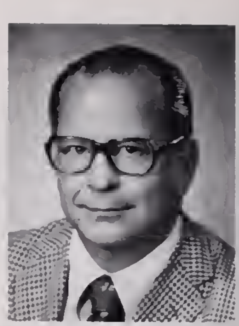
Richard P. Bowles
(1979-1980)

The Council

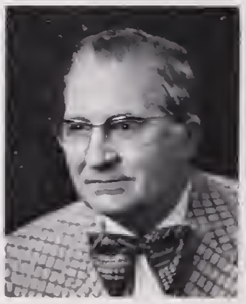
Richard C. Hedges
First District

John H. Walterscheid
Second District


Thomas J. Cooper
Third District


Richard H. Fallon
Third District

James M. Stokes
Third District


J. Otto Lottes
Third District

Theodore L. Paletta
Third District

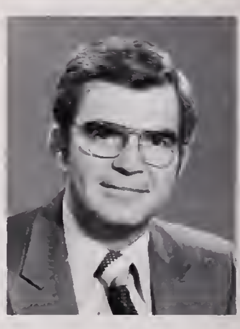
Frederick D. Peterson
Third District

Louis P. Hetlage
Fourth District
(Vice-Chairman)
(Deceased. Aug. 9, 1979

H. Peter Ekern
Fifth District

R. John Torontow
Sixth District

Irving H. Clark
Seventh District


Donald McIntosh
Seventh District

Ronald A. Youmans
Seventh District

Walter A. German
Eighth District

Marvin A. Singleton
Eighth District

Claude W. Cooper
Ninth District

Eugene T. Hansbrough
Tenth District
(Chairman)

Vice-Councilors

Gary Dyer
First District

Patricio Avila
Second District

Gerard M. Callaghan
Third District

(Picture
Not
Available)

Paul H. Rother
Fourth District

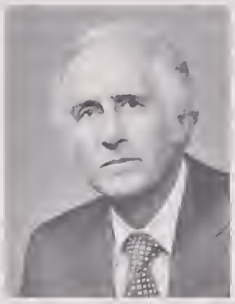
Mary J. McCaffree
Fifth District

A. J. Campbell
Sixth District

William D. Hoadley
Seventh District

Charles J. Ash
Eighth District

Jack Wiles
Ninth District


George H. Ladyman
Tenth District

Remember These Dates!

The 122nd

ANNUAL SESSION

of the
Missouri State Medical Association
will be held on

APRIL 17-20, 1980

Crown Center Hotel
Kansas City

MSMA Committees and Commissions 1979-1980

STANDING COMMITTEES

Constitution and Bylaws—R. Stacy Long, Kansas City, *Chairman* (1982); Miles C. Whitener, St. Louis (1980); William D. Soper, Liberty (1981); Roy Gillispie, Branson (1981); Robert R. MacDonald, St. Louis (1982).

Executive Committee—Andrew McCanse, Kansas City, *Chairman*; Richard V. Bradley, St. Louis; John I. Matthews, Jefferson City; Carol F. Williams, St. Louis; Eugene T. Hansbrough, Poplar Bluff; Louis P. Hetlage, Troy (1980).

Impaired Physician—Donald E. McIntosh, Kansas City, *Chairman* (1981); Henry V. Guhleman, Jefferson City (1980); David L. Ohlms, St. Louis (1980); James E. Young, Kansas City (1981); Arnold S. Block, St. Louis (1982).

Legislative Affairs—John I. Matthews, Jefferson City, *Chairman*; Andrew McCanse, Kansas City; Richard V. Bradley, St. Louis; Eugene T. Hansbrough, Poplar Bluff; Louis P. Hetlage, Troy; Hubert A. Ritter, St. Louis; Robert E. Bregant, Jefferson City; Walter A. German, Springfield (1980).

Planning—Paul H. Rother, St. Charles, *Chairman* (1983); Francis X. Li St. Louis (1980); Harry D. Haas, Kansas City (1980); E. Rule Ols Springfield (1981); James A. Hasek, Mountain Grove (1981); William Haynie, Butler (1982); J. Will Fleming, Moberly (1982); Joseph R. Prokop, Joseph (1983); Melvin C. Kasten, Cape Girardeau (1984); Gerald Hoxwo Mexico (1984).

Publications—Wilfred E. Wooldridge, Springfield, *Chairman*; Err Lorenc, Springfield; William C. Mixson, Kansas City; Charles S. Sherwin, Louis; Byron M. Stuart, Boonville (1980).

Voluntary Health Agencies—William C. Allen, Columbia, *Chairm* (1980); John D. Arnold, Kansas City (1981); Guy Magness, University (1981); Darrel Domann, Springfield (1982); Newton C. McCluggage, No Kansas City (1982).

STANDING COMMISSIONS

Continuing Education and Health Manpower—George H. Ladyman, Poplar Bluff, *Chairman* (1981); Ronald T. Hill, Dexter (1980); Wilhur A. Mullarky, St. Louis (1980); Marvin A. Singleton, Joplin (1980); W. Wayne Boydston, Odessa (1980); W. Thomas Morgan, Jr., West Plains (1980); Gerard M. Callaghan, St. Louis (1981); Charles N. Mullican, St. Joseph (1981); Larry Ozenberger, Plattsburg (1981); George D. Comfort, Mexico (1981); L. Arden Almquist, Kansas City (1982); William D. Bradshaw, Columbia (1982); Manuel R. Comas, Manchester (1982); John C. Soucy, St. Charles (1982); Charles A. Worley, Sweet Springs (1982).

Interspecialty Medicine—*Missouri Society of Pathologists* — T. J. Cooper, St. Louis, *Chairman*; *Missouri State Allergy Association* — J. Allen Thiel, St. Louis, *Missouri Society of Anesthesiologists* — Gale O. Jones, Kansas City; *Missouri Dermatological Society* — Larry Millikan, Columbia; *Missouri ENT Association, Inc.* — Donald G. Sessions, St. Louis; *Missouri Academy of Family Physicians* — C. W. Chastain, Flat River; *Missouri Society of Neurosurgeons* — Robert W. Forsythe, Kansas City; *Missouri OB-GYN Society* — George Fuchs, Columbia; *Missouri Ophthalmological Society, Inc.* — Truman B. Schertz, North Kansas City; *Missouri State Orthopaedic Association* — Ronald Hertel, St. Louis; *Missouri Academy of Pediatrics* — Donald L. Thurston, St. Louis; *Physical Medicine and Rehabilitation* — Otakar Machek, St. Louis; *Missouri Psychiatric Association* — Duane Hagen, St. Louis; *Missouri Radiological Society* — William McAlister, St. Louis; *Missouri Chapter, American College of Surgeons* — R. O. Frederick, St. Louis, *Missouri State Surgical Society* — Cyril Costello, St. Louis, *Missouri Thoracic Society* — James R. Wiant, St. Louis (1980).

Medical Economics, Third Party Medicine and Governme Relations—Harry C. Eggleston, St. Louis, *Chairman* (1982); John A. Griff Jr., Kansas City (1980); Charles H. Cozean, Jr., Cape Girardeau (1980); L. Magruder, Nevada (1980); Arturo C. Montes, St. Louis (1980); F. Anth Thomas, Kansas City (1980); Stanley S. Peterson, Springfield (1981); John Esther, Joplin (1981); J. Otto Lottes, St. Louis (1981); R. Phillip Ac St. Joseph (1981); A. E. Braverman, Kansas City (1981); Mary K. McCaff Jefferson City (1982); Max A. Heeb, Sikeston (1982); James L. Carpenter, Charles (1982); Rae W. Froelich, Lebanon (1982).

Medical-Legal Affairs—William J. Medlicott, Kansas City, *Chairm* (1982); Joseph S. Cope, Lexington (1980); Jerome I. Simon, St. Louis (19 Irving H. Clark, Kansas City (1980); Vicente D. Deles, Crystal City (19 George P. Wilson, Columbia (1980); Fred H. Thornton, Sikeston (19 William R. McPhee, Kansas City (1981); George L. Hawkins, Jr., St. L (1981); Edward Bare, Tarkio (1981); Richard O. Craig, St. Joseph (1981); Da W. Hall, Rogersville (1982); Jay L. Meyer, St. Louis (1982); Bernard Dra Rolla (1982); Gil Manalo, Carthage (1982).

Public Affairs—Ben A. Moranville, Columbia, *Chairman* (1982); Rich H. Loeb, Springfield (1980); Donald R. Germann, Kansas City (1980); Geo Q. Dunmire, Kennett (1980); Jill M. Clayton, St. Louis (1980); John M. La Florissant (1980); A. J. Campbell, Sedalia (1981); Sharon Waggoner, Joseph (1981); Ronald A. Youmans, Kansas City (1981); Robert F. Tobin, Joseph (1981); Jean A. Chapman, Cape Girardeau (1981); Byron E. Wa Jefferson City (1982); George Bohigian, St. Louis (1982); Lawrence O'Neal, St. Louis (1982); Vernon H. Balster, St. Louis (1982).

Component Societies in Affiliation With the Missouri State Medical Association

OUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
ndrew	1	Gilbert B. Kelley	Savannah	Warren C Baker	Savannah
udrain	5	Ben N. Jolly	Mexico	Mary Mullen	Mexico
arton	8	Alvin R. Cain	Lamar	Enrique Piedra	Lamar
oone	5	Ben A. Moranville	Columbia	James C. Denninghoff	Columbia
uchanan	1	Carl K. Ness	St. Joseph	Robert R. Stuher	St. Joseph
utler-Wayne-Ripley-Carter	10	S. K. Reddy	Poplar Bluff	J. W. Mathey	Poplar Bluff
allaway	5	Vernon Jackson	Fulton	George D. Groce	Fulton
ape Girardeau County Area Medical Society, Inc.	10	Charles Cozean, Jr.	Cape Girardeau	Kenneth D. Asher	Cape Girardeau
hariton-Macon-Monroe-Randolph	2	D. D. Stuart	Brunswick	R. L. Bautista	Moberly
lay	1	Robert D. Williams	Kansas City	John C. Hagan, III	N. Kansas City
linton	1	J. H. Sweiger	Plattsburg	L. A. Ozenberger	Plattsburg
ole	5	Larry Stauffer	Jefferson City	John J. Krautmann	Jefferson City
ooper	5			E. T. Humphreys	Boonville
allas-Hickory-Polk-Dade	8	Lee McNeel, Jr.	Greenfield	Monte R. Kahler	Bolivar
unklin	10	Jun-Shen Huang	Kennett	Quinton Tarver	Kennett
ranklin-Gasconade-Warren	4	James T. Shaw	Hermann	Wayne Stine	Washington
rand River Medical Society (Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb)	1	William L. Fair	Chillicothe	Albert D. Cross	Trenton
reene	8	William M. Walker	Springfield	John A. Mihalevich	Springfield
enry	6	R. H. King	Clinton	Kenneth F. Scott	Clinton
oward	5			M. P. Leech	Fayette
ckson	7	Donald E. McIntosh	Kansas City	George E. Volk	Kansas City
sper	8	Robert L. Willcoxon	Joplin	Howard H. Roberts	Joplin
fferson	10	Michael Blank	DeSoto	Benjamin I. Albano	Crystal City
hnson	6	Keith D. Jones	Warrensburg	Robert L. Cooper	Warrensburg
aclede	9	Rae W. Froelich	Lebanon	Gary M. Courter	Lebanon
afayette-Ray	6	William C. LaHue	Lexington	Catherine Boydston	Odessa
ake of the Ozarks Medical Society (Camden-Miller-Morgan)	5	Chris K. Fotopoulos	Osage Beach	M. R. Hayden	Camdenton
ewis-Clark-Scotland	2			Landis Y. Davis	Canton
arion-Ralls-Shelby	2	Federico Florendo, Jr.	Hannibal	Estrella Z. Avila	Hannibal
id-Missouri County Medical Society (Phelps-Crawford-Dent-Pulaski-Maries-Laclede)	9			H. Neal Grannemann	Rolla
ineral Area Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-Bollinger)	10			Walter Gray	Farmington
oniteau	5			L. M. Gallagher	California
ontgomery	5			S. J. Byland	Wellsville
orth Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Francis Tarvydas	Edina	Milton T. English	Kirksville
orthwest Missouri Medical Society (Nodaway-Holt-Atchison-Gentry-Worth)	1	John M. Wanamaker	Rock Port	Patrick B. Harr	Maryville
zarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald)	8	Richard J. Betz	Neosho	Serigo Cruz	Monett
emiscot	10	Andrew E. Painter	Portageville	Clarence McKaskle	Caruthersville
erry-Ste. Genevieve	10	Romeo R. Eugenio	Perryville	Job Pontillas	Perryville
ettis	6	H. John Erickson	Sedalia	Donald Allcorn	Sedalia
ke	2			Phil Pitney	Louisiana
atte	1			S. Lloyd Allen	Kansas City
. Charles-Lincoln	4	Charles Lisenmeyer	St. Charles	Michael J. Curry	St. Charles
. Louis Metropolitan Medical Society	3	George M. Bohigian	St. Louis	Robert R. MacDonald Harry C. Eggleston	St. Louis St. Louis
aline	6	Richard Raynor	Marshall	Michael Butner	Marshall
EMO County Medical Society (Stoddard-New Madrid-Mississippi-Scott)	10	Edwin J. Masters	Sikeston	Daniel Rosenstein	Sikeston
outh Central (Howell-Oregon-Texas-Wright-Douglas-Ozark)	9	Joe A. Wall	Houston	Jack N. Wiles	West Plains
ebster	8	T. M. Macdonnell	Marshfield	R. J. Bareis	Marshfield
est Central Missouri Medical Society (Bates-Cass-Cedar-St. Clair-Vernon)	6	Roy Pearse	Nevada	R. John Torontow	Nevada

Guide to Component Medical Societies

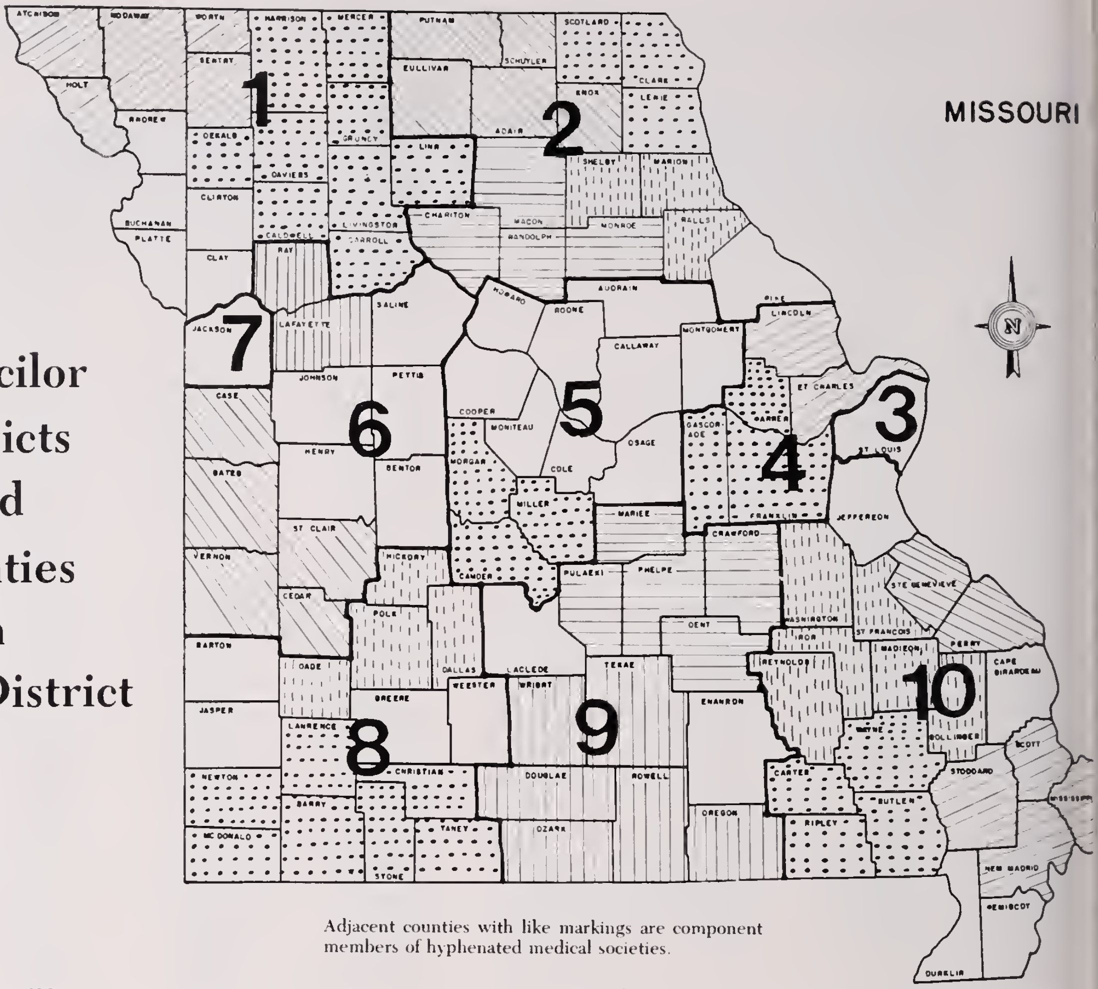
Following is a list of Missouri communities in which MSMA member-physicians are in active practice or reside. Name of the community is followed by the county in which it is located and the medical society to which physicians of that community normally would belong.

Town	*County*	*Medical Society*
A		
Advance	Stoddard	SEMO
Affton	St. Louis	St. Lous Metropolitan
Albany	Gentry	Northwest Missouri
Altenhurg	Perry	Perry-Ste. Genevieve
Appleton City	St. Clair	West Central
Arnold	Jefferson	Jefferson
Ashland	Boone	Boone
Aurora	Lawrence	Ozarks
Ava	Douglas	South Central
B		
Ballwin	St. Louis	St. Louis Metropolitan
Belton	Cass	West Central
Berkeley	St. Louis	St. Louis Metropolitan
Bethany	Harrison	Grand River
Bloomfield	Stoddard	SEMO
Blue Springs	Jackson	Jackson
Bolivar	Polk	Dallas-Hickory-Polk-Dade
Bonne Terre	St. Francois	Mineral Area
Boonville	Cooper	Cooper
Bourbon	Crawford	Mid-Missouri
Bowling Green	Pike	Pike
Branson	Taney	Ozarks
Braymer	Caldwell	Grand River
Brentwood	St. Louis	St. Louis Metropolitan
Bridgeton	St. Louis	St. Louis Metropolitan
Brookfield	Linn	Grand River
Browning	Linn	Grand River
Brunswick	Chariton	Chariton-Macon-Monroe-Randolph
Buckner	Jackson	Jackson
Buffalo	Dallas	Dallas-Hickory-Polk-Dade
Butler	Bates	West Central
C		
Cahool	Texas	South Central
Cainesville	Harrison	Grand River
California	Moniteau	Moniteau
Camdenton	Camden	Lake of the Ozarks
Cameron	Clinton	Clinton
Cape Girardeau	Cape Girardeau	Cape Girardeau
Cardwell	Dunklin	Dunklin
Carrollton	Carroll	Grand River
Carthage	Jasper	Jasper
Caruthersville	Pemiscot	Pemiscot
Cassville	Barry	Ozarks
Centralia	Boone	Boone
Charleston	Mississippi	SEMO
Chesterfield	St. Louis	St. Louis Metropolitan
Chillicothe	Livingston	Grand River
Clarksville	Pike	Pike
Clayton	St. Louis	St. Louis Metropolitan
Clinton	Henry	Henry
Columbia	Boone	Boone
Concordia	Lafayette	Lafayette-Ray
Crane	Stone	Ozarks
Creve Coeur	St. Louis	St. Louis Metropolitan
Crystal City	Jefferson	Jefferson
Cuba	Crawford	Mid-Missouri
D		
Desloge	St. Francois	Mineral Area
DeSoto	Jefferson	Jefferson
Dexter	Stoddard	SEMO
Doniphan	Ripley	Butler-Wayne-Ripley-Carter
E		
East Prairie	Mississippi	SEMO
Edina	Knox	North Central
Eldon	Miller	Lake of the Ozarks
El Dorado Springs	Cedar	West Central
Elsberry	Lincoln	St. Charles-Lincoln
Everton	Jackson	Jackson
Excelsior Springs	Clay	Clay
F		
Farmington	St. Francois	Mineral Area
Fayette	Howard	Howard
Fenton	St. Louis	St. Louis Metropolitan
Ferguson	St. Louis	St. Louis Metropolitan
Festus	Jefferson	Jefferson
Flat River	St. Francois	Mineral Area
Florissant	St. Louis	St. Louis Metropolitan
Forsyth	Taney	Ozarks
Fort Leonard Wood	Pulaski	Mid-Missouri
Fredericktown	Madison	Mineral Area
Frontenac	St. Louis	St. Louis Metropolitan
Fulton	Callaway	Callaway
G		
Gallatin	Daviess	Grand River
Gashland	Clay	Clay
Gerald	Franklin	Franklin-Gasconade-Warren
Gideon	New Madrid	SEMO
Gladden	St. Louis	St. Louis Metropolitan
Glasgow	Howard	Howard
Glendale	St. Louis	St. Louis Metropolitan
Grandview	Jackson	Jackson
Grant City	Worth	Northwest Missouri
Gravois Mills	Morgan	Lake of the Ozarks
Greenfield	Dade	Dallas-Hickory-Polk-Dade
H		
Hamilton	Caldwell	Grand River
Hannibal	Marion	Marrion-Ralls-Shelby
Harrison	Cass	West Central
Hayti	Pemiscot	Pemiscot
Herculaneum	Jefferson	Jefferson
Hermann	Gasconade	Franklin-Gasconade-Warren
Hickman Mills	Jackson	Jackson
Higginsville	Lafayette	Lafayette-Ray
Hillsboro	Jefferson	Jefferson
Hornersville	Dunklin	Dunklin
Houston	Texas	South Central
Humansville	Polk	Dallas-Hickory-Polk-Dade
Huntsville	Randolph	Chariton-Macon-Monroe-Randolph
I		
Illmo	Cape Girardeau	Cape Girardeau
Independence	Jackson	Jackson
Ironton	Iron	Mineral Area
J		
Jackson	Cape Girardeau	Cape Girardeau
Jefferson Barracks	St. Louis	St. Louis Metropolitan
Jefferson City	Cole	Cole
Jennings	St. Louis	St. Louis Metropolitan
Joplin	Jasper	Jasper
K		
Kahoka	Clark	Lewis-Clark-Scotland
Kansas City	Jackson	Jackson
Kennett	Dunklin	Dunklin
King City	Gentry	Northwest Missouri
Kirksville	Adair	North Central
Kirkwood	St. Louis	St. Louis Metropolitan
Knob Noster	Johnson	Johnson
Knox City	Knox	North Central
Koch	St. Louis	St. Louis Metropolitan

own	County	Medical Society
	L	
adue	St. Louis	St. Louis Metropolitan
amar	Barton	Barton
awson	Ray	Lafayette-Ray
eawood (Kan.)		Jackson
eadwood	St. Francois	Mineral ARea
ebanon	Laclede	Laclede
ee's Summit	Jackson	Jackson
emay	St. Louis	St. Louis Metropolitan
exington	Lafayette	Lafayette-Ray
iberty	Clay	Clay
inn	Osage	Cole
ockwood	Dade	Dallas-Hickory-Polk-Dade
ouisiana	Pike	Pike
	M	
acon	Macon	Chariton-Macon-Monroe-Randolph
alden	Dunklin	Dunklin
aplewood	St. Louis	St. Louis Metropolitan
arceline	Linn	Grand River
arshall	Saline	Saline
arshfield	Webster	Webster
artin City	Jackson	Jackson
aryville	Nodaway	Northwest Missouri
emphis	Scotland	Lewis-Clark-Scotland
exico	Audrain	Audrain
ilan	Sullivan	North Central
oberly	Randolph	Chariton-Macon-Monroe-Randolph
onett	Barry	Ozarks
ontgomery City	Montgomery	Montgomery
orehouse	New Madrid	SEMO
ound City	Holt	Northwest Missouri
ountain Grove	Wright	South Central
ountain View	Howell	South Central
ount Vernon	Lawrence	Ozarks
	N	
eosho	Newton	Ozarks
evada	Vernon	West Central
ew Florence	Montgomery	Montgomery
ew Haven	Franklin	Franklin-Gasconade-Warren
ew London	Ralls	Marion-Ralls-Shelby
ew Madrid	New Madrid	SEMO
ormandy	St. Louis	St. Louis Metropolitan
orth Kansas City	Clay	Clay
	O	
ak Grove	Jackson	Jackson
desa	Lafayette	Lafayette-Ray
'Fallon	St. Charles	St. Charles-Lincoln
livette	St. Louis	St. Louis Metropolitan
sceola	St. Clair	West Central
verland	St. Louis	St. Louis Metropolitan
wensville	Gasconade	Franklin-Gasconade-Warren
zark	Christian	Ozarks
	P	
acific	Franklin	Franklin-Gasconade-Warren
almyra	Marion	Marion-Ralls-Shelby
aris	Monroe	Chariton-Macon-Monroe-Randolph
arkville	Platte	Platte
arma	New Madrid	SEMO
attonsburg	Daviess	Grand River
attonville	St. Louis	St. Louis Metropolitan
erryville	Perry	Perry-Ste. Genevieve
iedmont	Wayne	Butler-Wayne-Ripley-Carter
ilot Knob	Iron	Mineral Area
ine Lawn	St. Louis	St. Louis Metropolitan
latte City	Platte	Platte
lattsburg	Clinton	Clinton
leasant Hill	Cass	West Central
oplar Bluff	Butler	Butler-Wayne-Ripley-Carter
ortageville	New Madrid	SEMO
otosi	Washington	Mineral Area

Town	County	Medical Society
Prairie Village (Kan.)		Jackson
Princeton	Mercer	Grand River
	R	
Raytown	Jackson	Jackson
Reeds Spring	Stone	Ozarks
Republic	Greened	Greene
Rich Hill	Bates	West Central
Richmond	Ray	Lafayette-Ray
Richmond Heights	St. Louis	St. Louis Metropolitan
Rivermines	St. Francois	Mineral Area
Robertson	St. Louis	St. Louis Metropolitan
Rock Hill	St. Louis	St. Louis Metropolitan
Rockport	Atchison	Northwest Missouri
Rogersville	Webster	Webster
Rolla	Phelps	Mid-Missouri
	S	
St. Ann	St. Louis	St. Louis Metropolitan
St. Charles	St. Charles	St. Charles-Lincoln
St. Clair	Franklin	Franklin-Gasconade-Warren
Ste. Genevieve	Ste. Genevieve	Perry-Ste. Genevieve
St. James	Phelps	Mid-Missouri
St. Joseph	Buchanan	Buchanan
St. Louis	St. Louis	St. Louis Metropolitan
Salem	Dent	Mid-Missouri
Salisbury	Chariton	Chariton-Marion-Monroe-Randolph
Sappington	St. Louis	St. Louis Metropolitan
Sarcoxie	Jasper	Jasper
Savannah	Andrew	Andrew
Sedalia	Pettis	Pettis
Shawnee Mission (Kan.)		Jackson
Shelbina	Shelby	Marion-Ralls-Shelby
Shelbyville	Shelby	Marion-Ralls-Shelby
Shrewbury	St. Louis	St. Louis Metropolitan
Sikeston	Scott	SEMO
Slater	Saline	Saline
Smithton	Pettis	Pettis
Smithville	Clay	Clay
Springfield	Greene	Greene
Stanberry	Gentry	Northwest Missouri
Steele	Pemiscot	Pemiscot
Steelville	Crawford	Mid-Missouri
Stockton	Cedar	West Central
Stafford	Greene	Greene
Sullivan	Franklin	Franklin-Gasconade-Warren
Sweet Springs	Saline	Saline
	T	
Tarkio	Atchison	Northwest Missouri
Thayer	Oregon	South Central
Trenton	Grundy	Grand River
Troy	Lincoln	St. Charles-Lincoln
	U	
Union	Franklin	Franklin-Gasconade-Warren
University City	St. Louis	St. Louis Metropolitan
	V	
Valley Park	St. Louis	St. Louis Metropolitan
Vandalia	Audrain	Audrain
Versailles	Morgan	Lake of the Ozarks
Vienna	Maries	Cole
	W	
Warrensburg	Johnson	Johnson
Warrenton	Warren	Franklin-Gasconade-Warren
Washington	Franklin	Franklin-Gasconade-Warren
Waverly	Lafayette	Lafayette-Ray
Waynesville	Pulaski	Mid-Missouri
Webb City	Jasper	Jasper
Webster Groves	St. Louis	St. Louis Metropolitan
Wellsville	Montgomery	Montgomery
Wentzville	St. Charles	St. Charles-Lincoln
West Plains	Howell	South Central
Willard	Greene	Greene
Willow Springs	Howell	South Central
Windsor	Henry	Henry
Winston	Daviess	Grand River

Councilor Districts and Counties in Each District


MISSOURI
1
2
3
4
5
6
7
8
9
10
N
ATCHISON
NODAWAY
WORTH
HARRISON
MERCER
PUTNAM
SCOTLAND
CLARK
SCHUYLER
SULLIVAN
GENTRY
HOLT
ANDREW
DEKALB
DAVIESS
GRUNDY
LINN
ADAIR
KNOX
LEWIS
SHELBY
MARION
CLINTON
BUCHANAN
PLATTE
CALDWELL
LIVINGSTON
CARROLL
CHARITON
MACON
RANDOLPH
MONROE
RALLS
CLAY
RAY
SALINE
HOWARD
BOONE
AUDRAIN
PIKE
LINCOLN
MONTGOMERY
CALLAWAY
JACKSON
LAFAYETTE
JOHNSON
PETTIS
COOPER
MONITEAU
ST CHARLES
WARREN
GASCONADE
OSAGE
COLE
MORGAN
ST LOUIS
CASS
HENRY
BENTON
BATES
MILLER
MARIES
FRANKLIN
CRAWFORD
JEFFERSON
ST CLAIR
VERNON
HICKORY
CAMDEN
PULASKI
PHELPS
STE GENEVIEVE
WASHINGTON
ST FRANCOIS
CEDAR
POLK
DALLAS
LACLEDE
DENT
IRON
PERRY
BARTON
DADE
WEBSTER
WRIGHT
TEXAS
REYNOLDS
MADISON
CAPE GIRARDEAU
GREENE
SHANNON
JASPER
LAWRENCE
WAYNE
BOLLINGER
SCOTT
NEWTON
CHRISTIAN
DOUGLAS
HOWELL
CARTER
STODDARD
MISSISSIPPI
BARRY
TANEY
OREGON
BUTLER
MC DONALD
STONE
OZARK
RIPLEY
NEW MADRID
PEMISCOT
DUNKLIN

Adjacent counties with like markings are component members of hyphenated medical societies.

DISTRICT	COUNCILOR	COUNTIES
FIRST	Richard C. Hedges, M.D., N. Kansas City	Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Cli ton, Daviess, DeKalb, Gentry, Grundy, Harrison, Hol Linn, Livingston, Mercer, Nodaway, Platte and Worth
SECOND	John H. Walterscheid, M.D., Hannibal	Adair, Chariton, Clark, Knox, Lewis, Macon, Mario Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Sco land, Shelby and Sullivan
THIRD	Thomas J. Cooper, M.D., St. Louis Richard H. Fallon, M.D., St. Louis James M. Stokes, M.D., St. Louis J. Otto Lottes, M.D., St. Louis Theodore L. Paletta, M.D., St. Louis Frederick D. Peterson, M.D., St. Louis	St. Louis Metropolitan
FOURTH	Louis P. Hetlage, M.D., Troy (Vice-Chairman)	Franklin, Gasconade, Lincoln, St. Charles and Warren
FIFTH	H. Peter Ekern, M.D., Mexico	Audrain, Boone, Callaway, Camden, Cole, Cooper, Ho ard, Miller, Moniteau, Montgomery, Morgan and Osage
SIXTH	R. John Torontow, M.D., Nevada	Bates, Benton,* Cass, Cedar, Henry, Johnson, Lafayett Pettis, Ray, St. Clair, Saline and Vernon
SEVENTH	Irving H. Clark, M.D., Kansas City Donald McIntosh, M.D., Kansas City Ronald A. Youmans, M.D., Kansas City	Jackson
EIGHTH	Walter A. German, M.D., Springfield Marvin A. Singleton, M.D., Joplin	Barry, Barton, Christian, Dade, Dallas, Greene, Hickor Jasper, Lawrence, McDonald, Newton, Polk, Stone, Tan and Webster
NINTH	Claude W. Cooper, M.D., Thayer	Crawford, Dent, Douglas, Howell, Laclede, Maries, Or gon, Ozark, Phelps, Pulaski, Shannon,* Texas and Wrig
TENTH	Eugene T. Hansbrough, M.D., Poplar Bluff (Chairman)	Bollinger, Butler, Cape Girardeau, Carter, Dunklin, Iro Jefferson, Madison, Mississippi, New Madrid, Pemisc Perry, Reynolds, Ripley, St. Francois, Ste. Genevie Scott, Stoddard, Washington and Wayne

---

* Counties with no medical organization.

Alphabetical Roster of Members

(The alphabetical list of members includes the name and number of each member's component society.)

A

ACH, RICHARO O	ST. LOUIS METROP.	190
ARDN, GED	JACKSON	098
BADA, ROLAND	ST. LOUIS METROP.	190
BADIR, RUSHDY	BOONE	026
BAQUETA, GAMALIEL P	JACKSON	098
BBDUD, NA8IL	ST. LOUIS METROP.	190
BOOU, NANCY L	JACKSON	098
BEL, CHAS C	ST. LOUIS METROP.	190
BEL, DLIVER	ST. LOUIS METROP.	190
BELARDO, MIGUEL L	ST. LOUIS METROP.	190
8ELE, WM A	COOPER	062
BELL, WALTER E	ST. LOUIS METROP.	190
BELLA, BIENVENIDO Z	JACKSON	098
BEND, MELVIN N	JACKSON	098
BERCROMBIE, KEITH J	JACKSON	098
BINOJA, CONRADO B	ST. LOUIS METROP.	190
BODEELY, DANIEL	ST. LOUIS METROP.	190
BRAMS, 8ERNARO M	JACKSON	098
BRAMS, MORRIS	ST. LOUIS METROP.	190
BRAMSON, CHAS L	ST. LOUIS METROP.	190
BRAMSON, SARA J	JACKSON	098
BU-SLEIMAN, RAYMOND	ST. LOUIS METROP.	190
CKER, HARRY L	ST. LOUIS METROP.	190
CKERMAN, LAUREN V	ST. LOUIS METROP.	190
CUFF, R P	BUCHANAN	030
DAMS, HAROLD D	BOONE	026
DAMS, HOWARD D	CLAY	050
DAMS, RILEY R	CAPE GIRARDEAU	042
DAMS, RO8T B	JASPER	102
DELMAN, ARTHUR	JACKSON	098
OELMANN, EUGENE	ST. LOUIS METROP.	190
DEYEMI-DORO, HENRY O	ST. LOUIS METROP.	190
DLER, BENARO C	ST. LOUIS METROP.	190
DLER, FEOERICO	JACKSON	098
FF, HELEN	ST. LOUIS METROP.	190
FUWAPE, EMMANUEL A	ST. LOUIS METROP.	190
GASINO, ARMELA M	ST. LOUIS METROP.	190
GASINO, GAUDENCIO L	ST. LOUIS METROP.	190
GEE, LOREN G	JACKSON	098
GRESS, HARRY	ST. LOUIS METROP.	190
GUILERA, TRINIOAD J	C-M-M-R	046
GUINALOO, JAIME A	ST. LOUIS METROP.	190
HAD, ABOUL	BUCHANAN	030
HADI, ABO U	ST. LOUIS METROP.	190
HERN, ARCHIBALD M	ST. LOUIS METROP.	190
HLERING, GEO H	ST. LOUIS METROP.	190
HLVIN, ROBT C	SEMD	202
HMAO, BASHIR	ST. LOUIS METROP.	190
HMAD, RASHID	SOUTH CENTRAL	206
HMED, NOOR	ST. LOUIS METROP.	190
AITKEN, LDUIS F	ST. LOUIS METROP.	190
AJANS, ZAKI A	AUORAIN	014
AKER, UMIT T	ST. LOUIS METROP.	190
AKIN, C. D	JACKSON	098
AKS, DANL	JACKSON	098
AKYOL, SALIM	ST. LOUIS METROP.	190
AL-ALY, MDHAMMED	ST. LOUIS METROP.	190
AL-SHATHIR, SAA M	JASPER	102
ALBANI, FRANK J	CLAY	050
ALBANO, BENJ I	JEFFERSON	106
ALBERA, VICTOR H	ST. LOUIS METROP.	190
ALBERG, MARVIN R	JACKSON	098
ALBERT, INGRID	ST. LOUIS METROP.	190
ALCANCIA, ELPIDID Y	GREENE COUNTY	082
ALOERMAN, DONALD P	JACKSON	098
ALDERMAN, THOS F	JACKSON	098
ALDRIDGE, JOHN	JACKSON	098
ALEGRE, JORGE M	ST. LOUIS METROP.	190
ALEKSANDER, BERNARDO G	ST. LOUIS METROP.	190
ALEX, MORRIS	ST. LOUIS METROP.	190
ALEXANDER, GEO K	ST. LOUIS METROP.	190
ALFIE, SALOMON	JACKSON	098
ALLAIN, JAMES J	CLAY	050
ALLAN, JAMES E	COLE	058
ALLBEE, ROGER H	JEFFERSON	106
ALLEBACH, HOBART K	JACKSON	098
ALLEN, ARTHUR A	JACKSON	098
ALLEN, DAVID O	JASPER	102
ALLEN, HENRY C	ST. LOUIS METROP.	190
ALLEN, HOLLIS N	ST. LOUIS METROP.	190
ALLEN, JAMES H	ST. LOUIS METROP.	190
ALLEN, JERRY H	F-G-W	074
ALLEN, JERRY H	GREENE COUNTY	082
ALLEN, JOS E	BOONE	026
ALLEN, LOUIS A	CLAY	050
ALLEN, MELVIN A	ST. LOUIS METROP.	190
ALLEN, ROBERT W	BOONE	026
ALLEN, ROBT E	JACKSON	098
ALLEN, SAML L	PLATTE	188
ALLEN, WILLARD M	ST. LOUIS METROP.	190
ALLEN, WILLIAM C	BOONE	026
ALLEN, WM C	BOONE	026
ALLEN, WM E	ST. LOUIS METROP.	190
ALLISON, JAMES B	GREENE COUNTY	082
ALMIRON, OSIAS A	ST. LOUIS METROP.	190
ALMQUIST, L A	JACKSON	098
ALONSO, JOSE M	ST. LOUIS METROP.	190
ALONSO-YAGUE, PASCUAL	ST. LOUIS METROP.	190
ALSOP, WEBB S	JACKSON	098
ALTHEIDE, HARVEY E	ST. LOUIS METROP.	190
ALTHEIDE, JOHN P	ST. LOUIS METROP.	190
ALTMAN, MARTIN P	ST. CHARLES-LINCOLN	126
ALTOMARE, EOWARD P	JACKSON	098
ALUL, MOHAMMAD-ALI H	ST. CHARLES-LINCOLN	126
ALVAREZ, ULISES C	ST. LOUIS METROP.	190
ALVIS, EDMUND B	ST. LOUIS METROP.	190
ALYEA, JAMES O	BOONE	026
AMADO-LEDO, OAVID E	ST. LOUIS METROP.	190
AMANAT, HABIBOLLAN	ST. LOUIS METROP.	190
AMES, MARY B	BOONE	026
AMES, WM H	BUCHANAN	030
AMIN, AURORA	ST. LOUIS METROP.	190
AMIN, NAVIN P	ST. LOUIS METROP.	190
AMJAD, MOHAMMAD T	ST. LOUIS METROP.	190
AMMATELLI, FRANCIS J	JACKSON	098
AMDURY, RAYMDND A	JACKSON	098
AMROMIN, GEORGE D	BOONE	026
ANCHETA, APOLINARIO A	GREENE COUNTY	082
ANDERSON, CHARLES B	ST. LOUIS METROP.	190
ANDERSON, IVAN A	BOONE	026
ANDERSON, JOHN M	ST. LOUIS METROP.	190
ANDERSON, PAUL B	OZARKS	166
ANDERSON, PHILIP C	BOONE	026
ANDERSON, RAYMOND B	JACKSON	098
ANDERSON, ROBERT	CLAY	050
ANDERSON, THOS R	BOONE	026
ANDREASSEN, DIMIL F	MID-MISSOURI	182
ANORES, EDWARD H	BUCHANAN	030
ANDREWS, BERNEIL W	CLAY	050
ANDRUS, BAILEY C	JACKSON	098
ANDRUS, DON L	B-W-R-C	034
ANGLO, LUIS B	ST. LOUIS METROP.	190
ANSLINGER, DAVID L	ST. LOUIS METROP.	190
ANSTEY, GEO C	ST. LOUIS METROP.	190
ANSTEY, JOHN	ST. LOUIS METROP.	190
ANTHONY, DALLAS D	GREENE COUNTY	082
ANTHONY, JAMES P	JACKSON	098
ANTONIOU, CHRISTOS A	ST. LOUIS METROP.	190
ANWAR, MOHAMMAD A	ST. LOUIS METROP.	190
APARICIO, SAMUEL E	BUCHANAN	030
APOSTOL, ANDRES G	OZARKS	166
APPLEBERRY, CHAS H	MINERAL AREA	138
AQUINO, TOMAS	ST. LOUIS METROP.	190
ARBAB, ALI A	JACKSON	098
ARCELONA, JESUS	ST. LOUIS METROP.	190
ARCHER, CAROL R	ST. LOUIS METROP.	190
ARENOS, PROCESO T	ST. LOUIS METROP.	190
ARIAS, FERNANDO	ST. LOUIS METROP.	190
ARMS, ARNOLD V	JACKSON	098
ARMS, RICHARD A	JACKSON	098
ARMSTRONG, JAY H	CLAY	050
ARNESON, AXEL N	ST. LOUIS METROP.	190

ARNEY, WM G	ST. LOUIS METROP.	190
ARNOLD, HERBERT M	BARTON	018
ARNOLD, JAMES T	JASPER	102
ARNOLD, JOHN D	JACKSON	098
ARNOLD, KENNETH J	ST. LOUIS METROP.	190
ARNOLD, RICHARD C	BOONE	026
ARNOT, JOHN P	ST. LOUIS METROP.	190
ARONBERG, JEROME M	ST. LOUIS METROP.	190
ARONSON, ABRAHAM	ST. LOUIS METROP.	190
ARORA, NARINDER S	OZARKS	166
ARRIBAS, AURORA I	JACKSON	098
ARRIBAS, NEVA P	ST. LOUIS METROP.	190
ARRIBAS, ROMEO F	JACKSON	098
ARSENOVIC, ALEXANDER	JACKSON	098
ARST, HERBERT E	CLAY	050
ARTHAUD, J B	BOONE	026
ASEL, NORMAN D	BOONE	026
ASGHAR, MOHAMMAD	ST. LOUIS METROP.	190
ASH, CHARLES J	GREENE COUNTY	082
ASHBY, JENNIFER D	JACKSON	098
ASHBY, RICHARD	ST. LOUIS METROP.	190
ASHCRAFT, KEITH W	JACKSON	098
ASHER, A G	JACKSON	098
*ASHER, KENNETT	CAPE GIRARDEAU	042
ASHLEY, HUGH V	CAPE GIRARDEAU	042
ASHLEY, JOHN T	JACKSON	098
ASHLEY, LILLARD G	JACKSON	098
ASHLEY, THOS E	GREENE COUNTY	082
ASKEW, JOHN H	SEMO	202
ATKINSON, THOS E	GREENE COUNTY	082
ATWELL, FLOYD C	JACKSON	098
AUER, ARTHUR I	ST. LOUIS METROP.	190
AUFDER HEIDE, G R	ST. LOUIS METROP.	190
AUGUSTE, MELEDAIN	ST. LOUIS METROP.	190
AUGUSTIN, CESAR	ST. LOUIS METROP.	190
AULENBACHER, CARL E	F-G-W	074
AUNER, CECIL R	GREENE COUNTY	082
AUSTIN, GEORGE M	JACKSON	098
AVERILL, KEITH H	JACKSON	098
AVERY, WILLARD B	COOPER	062
AVILA, ESTRELLA Z	M-R-S	130
AVILA, PATRICIO C	M-R-S	130
AVIOLI, LOUIS V	ST. LOUIS METROP.	190
AYATA, SEDAT M	ST. LOUIS METROP.	190
AYKENT, YAVUZ	ST. LOUIS METROP.	190
AYLWARD, HOWARD J	ST. LOUIS METROP.	190
AYRES, ROBERT A	ST. LOUIS METROP.	190
AYRES, STEPHEN M	ST. LOUIS METROP.	190
AYVAZIAN, VATCHE H	ST. LOUIS METROP.	190
AZAN, KENNETH N	PETTIS	178
AZUMA, NOBUTAKA	ST. LOUIS METROP.	190

B

BABKA, JOS J	ST. LOUIS METROP.	190
BACH, LYSLE M	M-R-S	130
BACK, DONALD K	GREENE COUNTY	082
BACKER, MATTHIAS H	ST. LOUIS METROP.	190
BADAMO, FRANCIS P	JACKSON	098
BAER, ALVIN J	JACKSON	098
BAER, JILL M	ST. LOUIS METROP.	190
BAGBY, JAMES W	ST. LOUIS METROP.	190
BAGWE, LATA R	ST. LOUIS METROP.	190
BAGWE, RANJIT M	ST. CHARLES-LINCOLN	126
BAHL, OM P	ST. LOUIS METROP.	190
BAHN, CHAS F	CAPE GIRARDEAU	042
BAI, SAMUEL S	JEFFERSON	106
BAIK, KENNETH Y	SALINE	198
BAILEY, ALAN H	GREENE COUNTY	082
BAILEY, DRENNAN	ST. LOUIS METROP.	190
BAILEY, HUGH R	JACKSON	098
BAILEY, WM H	ST. LOUIS METROP.	190
BAIRD, KEIM L	ST. CHARLES-LINCOLN	126
BAKER, ALBERT S	BOONE	026
BAKER, DONALD L	F-G-W	074
BAKER, GARY E	BOONE	026
BAKER, JAMES M	BOONE	026
BAKER, JOSEPHINE D	C-M-M-R	046
BAKER, PHILIP J	JACKSON	098
BAKER, WARREN C	ANDREW	010
BALDWIN, RICHARD	ST. LOUIS METROP.	190
BALDWIN, RICHARD M	GREENE COUNTY	082
BALDWIN, THEODORE R	LAFAYETTE-RAY	118
BALES, EUGENE L	GRAND RIVER	078
BALHUIZEN, JOHN	CLAY	050
BALLAL, H S	ST. LOUIS METROP.	190
BALLARD, DEWEY P	BUCHANAN	030
BALLARD, V B	JACKSON	098
BALLINGER, WALTER F	ST. LOUIS METROP.	190
BALSTER, VERNON H	ST. LOUIS METROP.	190
BAMSHAD, JERRY	ST. LOUIS METROP.	190
BANDLE, DONALD F	ST. LOUIS METROP.	190
BANERJEE, DILIP	F-G-W	074
BANEZ, COLITA L	ST. LOUIS METROP.	190
BANGASH, JAVED I	C-M-M-R	046
BANKUTI, FERENC	JACKSON	098
BANTON, MILAGROS T	ST. LOUIS METROP.	190
BANTON, THOMAS J	ST. LOUIS METROP.	190
BANTON, WM C	ST. LOUIS METROP.	190
BARBEE, CHAS W	BOONE	026
BARBERO, GIULIO J	BOONE	026
BARBOUR, MARVIN R	B-W-R-C	034
BARDSLEY, JOHN L	ST. LOUIS METROP.	190
BARE, CHESTER I	JACKSON	098
BARE, EDWARD F	NORTHWEST	158
BAREIS, ROBT J	WEBSTER	210
BARELLI, PAT A	JACKSON	098
BARKER, EDWARD T	ST. LOUIS METROP.	190
BARLOON, JAMES H	JACKSON	098
BARNARD, JOHN L	JACKSON	098
BARNER, HENDRICK B	ST. LOUIS METROP.	190
BARNES, LARRY G	OZARKS	1
BARNES, SETH S	CAPE GIRARDEAU	0
BARNETT, DANIEL K	JACKSON	0
BARNETT, FLOYD A	C-M-M-R	0
BARNETT, GORDON P	JACKSON	0
BARNHILL, FLOYD R	GREENE COUNTY	0
BARONE, PAUL L	WEST CENTRAL	2
BARR, GLENN A	JACKSON	0
BARRAGAN, HECTOR D	ST. LOUIS METROP.	1
BARRETT, SCOTT R	ST. LOUIS METROP.	1
BARRETT, SCOTT R	ST. LOUIS METROP.	1
BARROW, JACK	ST. LOUIS METROP.	1
BARRY, GERALD W	JACKSON	0
BARRY, WM B	JACKSON	0
BARTELL, MICHAEL F.L.	ST. LOUIS METROP.	1
BARTER, BRUCE	JACKSON	0
BARTLETT, HUGH C	MID-MISSOURI	1
BARTLETT, JOHN E	GREENE COUNTY	0
BARTLEY, RICHARD L	GREENE COUNTY	0
BARTNICK, MITCHEL L	ST. LOUIS METROP.	1
BARTON, JEAN C	JACKSON	0
BARTON, JOHN L	CAPE GIRARDEAU	0
BARTON, LESLIE G	ST. LOUIS METROP.	1
BARTON, ROBT W	ST. LOUIS METROP.	1
BARTULICA, NICHOLAS	BUCHANAN	0
BASANTZ, FERNANDO V	JACKSON	0
BASHITI, MOHAMMAD F	ST. LOUIS METROP.	1
BASKA, RICHARD E	JACKSON	0
BASKURT, MEHMET V	B-W-R-C	0
BASS, WALTER R	JACKSON	0
BASSMAN, ROLAND S	ST. LOUIS METROP.	1
BASTOW, HERBERT C	BOONE	0
BATES, GEO C	CLAY	0
BATTMER, ROBT E	JACKSON	0
BAUER, EUGENE A	ST. LOUIS METROP.	1
BAUER, JOHN O	ST. LOUIS METROP.	1
BAUER, JOHN H	BOONE	0
BAUER, JOS A	ST. LOUIS METROP.	1
BAUER, LAFE W	JACKSON	0
BAUER, ROBT A	ST. LOUIS METROP.	1
BAUER, SPOMENKO	ST. LOUIS METROP.	1
BAULA, ARMINDO G	ST. LOUIS METROP.	1
BAUM, FRANK E	JACKSON	0
BAUMAN, HENRY C	NORTHWEST	1
BAUMANN, ALBERT R	MID-MISSOURI	1
BAUMGARTEN, WALTER	ST. LOUIS METROP.	1
BAUSCHARD, FREDERICK D	ST. LOUIS METROP.	1
BAUTISTA, ROGELIO L	C-M-M-R	0
BAY, MERRILL R	JACKSON	0
BAYER, WILLIAM L	JACKSON	0
BEALER, LOUIS A	LACLEDE	1
BEALL, MC PHERSON S	JACKSON	0
BEAMON, RICHARD F	CLAY	0
BEARD, WM J	JACKSON	0
BEARE, J B	ST. LOUIS METROP.	1

---

* Doctor of Osteopathy.

ARE, LUCIA V	ST. LOUIS METROP.	190
ASLEY, LOUIS K	ST. LOUIS METROP.	190
ATD, OAVIO L	ST. LOUIS METROP.	190
ATTY, EUGENE C	JACKSON	098
ATTY, NINA O	JACKSON	098
ATY, WM R	ST. LOUIS METROP.	190
AUCHAMP, GARY D	JACKSON	098
CK, CALVIN E	JACKSON	098
CK, MARCUS R	BOONE	026
CK, PAUL M	BUCHANAN	030
CKER, BERNARD	ST. LOUIS METROP.	190
CKER, EDWARD J	ST. LOUIS METROP.	190
CKER, RICHARO R	JACKSDN	098
CKER, ROBT L	ST. LOUIS METROP.	190
CKER, RDLFE A	JACKSON	098
CKER, STANLEY C	ST. LOUIS METROP.	190
CKETTE, EOMUND	ST. LOUIS METROP.	190
CKMAN, DONALO E	ST. LOUIS METROP.	190
DWINEK, JOHN	ST. LOUIS METROP.	190
EKS, JOHN W	JACKSON	098
HBAHANI, PARVIZ M	ST. LOUIS METROP.	190
HELER, EDWARO M	BUCHANAN	030
HRENDS, STEVEN H	JACKSON	098
HRENS, OONALO T	ST. LOUIS METROP.	190
HRENS, GERALO L	ST. LOUIS METROP.	190
IDLE, RAYMONO J	ST. LOUIS METROP.	190
ISNER, DONALO H	GREENE COUNTY	082
LANCOURT, DUNET F	ST. LOUIS METROP.	190
LDEN, EOGAR A	COLE	058
LEN, MARIETTA	JEFFERSON	106
LEW, JOE E	ST. LOUIS METROP.	190
LL, HUBERT H	JACKSON	098
LL, MARTIN J	ST. LOUIS METROP.	19D
LL, ROBT M	M-R-S	130
LL, WM F	JACKSDN	098
NAGE, CLARENCE M	ST. LOUIS METROP.	190
NEDICT, WILLIAM W	ST. LOUIS METROP.	190
NITONE, JERRY O	PEMISCOT	170
NNETT, JAMES D	JACKSON	098
NNETT, JOHN	ST. LOUIS METROP.	190
NNETT, KENNETH J	ST. LOUIS METROP.	190
NNETT, ROBERT U	GREENE COUNTY	082
NNOCH, SHANE L	GREENE COUNTY	082
NOIST, WALTER F	ST. LOUIS METROP.	190
NDIT, HECTDR W	JACKSON	098
NSDN, GEDRGE N	JACKSON	098
NSON, JOHN F	ST. LOUIS METROP.	190
NSON, LARRY E	CLAY	050
NSON, RONALO G	GREENE COUNTY	082
NSON, SCOTT C	BUCHANAN	030
NSON, WILLIAM F	JACKSON	098
NTINGANAN, VICTOR O	MINERAL AREA	138
NTLAGE, CHAS H	JASPER	102
NTLEY, JOHN O	GREENE COUNTY	082
BERARD, LOUIS N	ST. LOUIS METROP.	190
BERENSON, SHELDON E	JACKSON	098
BERG, EDWARD F	ST. LOUIS METROP.	190
BERG, LEONARO	ST. LOUIS METROP.	190
BERG, RALPH	ST. LOUIS METROP.	190
BERGER, EOWARD J	ST. LOUIS METROP.	190
BERGMAN, HUGO F	ST. LOUIS METROP.	190
BERGMANN, OWAYNE L	ST. LOUIS METROP.	190
BERGMANN, JOHN F	ST. LOUIS METROP.	190
BERGMANN, MARTIN	ST. LOUIS METROP.	190
BERGMANN, VICTOR H	JACKSON	098
BERGNER, GRACE E	ST. LOUIS METROP.	190
BERLANO, HARRY I	ST. LOUIS METROP.	190
BERLIN, ROGER	JACKSON	098
8ERMAN, WM	ST. LOUIS METROP.	190
BERNABE, FLORINIO H	ST. LOUIS METROP.	190
BERNABE, OFELIA M	ST. LOUIS METROP.	190
BERNARD, JAMES W	PEMISCOT	170
8ERNDSEN, GERARD H	ST. LOUIS METROP.	190
BERNEY, FRANCIS J	BUCHANAN	030
BERNI, ANTHONY A	ST. LOUIS METROP.	190
BERNSTEIN, AARON M	ST. LOUIS METROP.	190
BERRY, JOHN W	ST. LOUIS METROP.	190
BERRY, MAXWELL G	JACKSON	098
BERRY, PAUL T	GREENE COUNTY	082
BERWALO, OAVID M	ST. LOUIS METROP.	190
BERWALO, IRVIN I	ST. LOUIS METROP.	190
BEST, ROBT B	LAFAYETTE-RAY	118
BETTINGER, IRENE E	JACKSON	098
BETTONVILLE, PAUL J	ST. LOUIS METROP.	190
BETZ, RICHARO J	OZARKS	166
BETZ, ROBERT F	OZARKS	166
BHARATH, SOMASUNDARAM	MID-MISSOURI	182
BHATI, OEO K	MIO-MISSOURI	182
BHATTACHARYA, ARJUN	ST. LOUIS METROP.	190
BHENO, OAVID P	JASPER	102
BHUTTA, HAROLO M	MINERAL AREA	138
BICKEL, VERN T	BARTON	018
BICKLEY, JAMES E	JACKSON	098
BIOOY, RALPH L	ST. LOUIS METROP.	190
BIONICK, TERRANCE A	JACKSON	098
BIOWELL, JO J	JACKSON	098
BIDWELL, ROBT E	JACKSON	098
BIELLO, OANIEL R	ST. LOUIS METROP.	190
BIERY, RICHARO M	JACKSON	098
BIGGS, ALFREO O	JACKSON	098
BIGGS, FREO J	8-W-R-C	034
BIGGS, HARRY L	JACKSON	098
BIGGS, JOHN	ST. LOUIS METROP.	190
BILCHIK, RONALO C	ST. LOUIS METROP.	190
BILLS, MARVIN L	JACKSON	098
BILLY, LAWRENCE J	ST. LOUIS METROP.	190
BILSKY, NATHAN	ST. LOUIS METROP.	190
BINOA, ROBERT E	JACKSON	098
BINOBEUTEL, OONALD A	ST. LOUIS METROP.	190
BINDER, MORTON A	ST. LOUIS METROP.	190
BINNINGTON, H B	ST. LOUIS METROP.	190
8IRCHER, JOHN L	ST. LOUIS METROP.	190
BIRO, H W	ST. LOUIS METROP.	190
BIRO, WM J	JASPER	102
BIRENBAUM, AARON	ST. LOUIS METROP.	190
BIRGE, CLIFFORD A	ST. LOUIS METROP.	190
BIRK8Y, WM F	BOONE	026
BIRSNER, FRANK H	JASPER	102
BISHOP, MARION D	ST. LOUIS METROP.	190
BISNO, DANL	ST. LOUIS METROP.	190
BIZEK, JOS L	OZARKS	166
BLACK, OON A	JACKSON	098
BLACK, EUGENE C	JACKSON	098
BLACK, JOSEPH T	ST. LOUIS METROP.	190
BLACK, ROSS R	JACKSON	098
BLACK, SAML P	BOONE	026
BLACK, THOMAS C	JACKSON	098
BLACKMAN, PATRICIA A	ST. LOUIS METROP.	190
BLACKWELL, CHAS W	BOONE	026
BLAOES, ROSS D	GREENE COUNTY	082
BLADOW, TERRENCE C	JASPER	102
BLAIR, JOHN O	ST. LOUIS METROP.	190
BLAIR, OLGA M	ST. LOUIS METROP.	190
BLAIR, VILRAY P	ST. LOUIS METROP.	190
BLALOCK, ROBT W	SALINE	198
BLAND, HAROLD E	BOONE	026
BLANK, MICHAEL K	JEFFERSON	106
BLANKENSHIP, OALE M	CAPE GIRAROEAU	042
BLANKENSHIP, GEO W	OZARKS	166
BLANTON, JOS C	SEMO	202
BLATH, RICHARO A	ST. LOUIS METROP.	190
BLEISCH, VIRGIL R	ST. LOUIS METROP.	190
BLIM, RICHARD O	JACKSON	098
BLOCK, ARNOLO S	ST. LOUIS METROP.	190
BLOCK, JEROME E	PETTIS	178
BLOUNT, LEE	ST. LOUIS METROP.	190
*BLUM, MICHAEL A	JACKSON	098
BLYTHE, JAMES G	ST. LOUIS METROP.	190
BOBROW, JAMES C	ST. LOUIS METROP.	190
BOCCARDO, HUMBERTO	ST. LOUIS METROP.	190
BOCKELMAN, CLIFFORD H	ST. LOUIS METROP.	190
BOOENHAUSEN, GARY E	JACKSON	098
BOEOEKER, ROY V	ST. LOUIS METROP.	190
BOGART, OOUGLAS B	JACKSON	098
BOGER, JAMES W	PETTIS	178
BOHAN, JAMES A	BOONE	026
BOHIGIAN, GEO M	ST. LOUIS METROP.	190
BOHLING, COREY A	ST. LOUIS METROP.	190
BOHNSACK, RALPH W	GRAND RIVER	078
BOLDIZAR, ALBERT G	ST. LOUIS METROP.	190
BOLOT, THOS H	ST. LOUIS METROP.	190
BOLES, C R	ST. LOUIS METROP.	190
BOLINSKE, ROBT E	ST. LOUIS METROP.	190
BOLLOZOS, GEORGE O	ST. LOUIS METROP.	190

---

ctor of Osteopathy

BOLTON, ROBT L	ST. LOUIS METROP.	190
BONACORSI, JOHN	ST. LOUIS METROP.	190
BOND, LESLIE F	ST. LOUIS METROP.	190
BONDURANT, BRYCE H	ST. LOUIS METROP.	190
BONEBRAKE, ALBERT J	GREENE COUNTY	082
BONEBRAKE, MAC D	GREENE COUNTY	082
BONFANTI, ALBERT L	ST. LOUIS METROP.	190
BONIFACIO, ANDRES S	JEFFERSON	106
BONIUK, ISAAC	ST. LOUIS METROP.	190
BONNEY, SAML C	F-G-W	074
BONO, GREGORY L	JACKSON	098
BONSANTI, ROBT L	ST. LOUIS METROP.	190
BOONE, OANL C	CLAY	050
BOONE, MARTIN H	GREENE COUNTY	082
BOONKHAM, CHOTCHAI	ST. LOUIS METROP.	190
BOONSHAFT, BENJE	ST. LOUIS METROP.	190
BOONYASAI, BOONFU	MINERAL AREA	13B
BOOTH, WM V	SEMO	202
BOPP, JON R	JASPER	102
BORDY, MARVIN D	JACKSON	098
BORELLO, DAN J	JASPER	102
BORENSTINE, JOS	JACKSON	09B
BORJA, EGBERT R	GREENE COUNTY	0B2
BORKAR, C J	JACKSON	098
BOROWSKY, BENJ A	ST. LOUIS METROP.	190
BORROMEO, CARLOS J	M-R-S	130
BORSUK, GREGORY M	JACKSON	09B
BORTNICK, ARTHUR R	ST. LOUIS METROP.	190
BORTNICK, EUGENE	JACKSON	09B
BOSCHE, ALFRED J	ST. LOUIS METROP.	190
BOTWIN, ARNOLD E	JACKSON	09B
BOUHASIN, JOHN D	ST. LOUIS METROP.	190
BOURGEOIS, CURTIS H	BOONE	026
BOURJOLLY, WILSON P	ST. LOUIS METROP.	190
BOURKE, THOS E	ST. LOUIS METROP.	190
BOVERI, JOS C	ST. LOUIS METROP.	190
BOWDERN, EDWARD H	ST. LOUIS METROP.	190
BOWE, EDWIN E	COLE	05B
BOWEN, STEPHEN F	ST. LOUIS METROP.	190
BOWER, RICHARD	ST. LOUIS METROP.	190
BOWER, ROGER H	BOONE	026
BOWERMAN, HAROLD H	ST. LOUIS METROP.	190
BOWERS, JAMES E	ST. LOUIS METROP.	190
BOWERSOX, WARREN A	ST. LOUIS METROP.	190
BOWLES, G R	ST. LOUIS METROP.	190
BOWLES, RICHARD P	CLAY	050
BOWLES, WM T	ST. LOUIS METROP.	190
BOWMAN, MELVIN C	OZARKS	166
BOWMAN, W K	CAPE GIRARDEAU	042
BOWNIK, THEOOORE B	CLAY	050
BOWSER, JOHN F	JACKSON	098
BOWSER, ROBERT L	CLAY	050
BOYARSKY, SAUL	ST. LOUIS METROP.	190
BOYCE, JOHN M	AUDRAIN	014
BOYD, GEO K	JACKSON	098
BOYDSTON, CATHERINE O	LAFAYETTE-RAY	11B
BOYDSTON, WYATT W	LAFAYETTE-RAY	11B
BOYER, PETER A	COLE	05B
BOYER, PHILIP A	JACKSON	09B
BOYLAN, PETER C	JACKSON	09B
BRABY, HOWARD H	JACKSON	098
BRADFORD, JOHN F	JACKSON	09B
BRADLEY, RICHARD V	ST. LOUIS METROP.	190
BRADLEY, WM W	AUORAIN	014
BRADSHAW, WM D	BOONE	026
BRADY, HARRY R	ST. LOUIS METROP.	190
BRADY, HUGH S	LAFAYETTE-RAY	118
BRAHMACUPTA, NANTHANA	CLAY	050
BRAMS, JACK B	JACKSON	098
BRANCATO, OONALD H	ST. LOUIS METROP.	190
BRAND, EARL L	ST. LOUIS METROP.	190
BRAND, STANLEY N	JACKSON	09B
BRANDON, FREDERICK M	JASPER	102
BRANGLE, ROBT W	ST. LOUIS METROP.	190
BRAUFMAN, HARVEY S	ST. LOUIS METROP.	190
BRAUN, ALAN L	COLE	05B
BRAUN, WILLIAM J	JACKSON	098
BRAVERMAN, ABE E	JACKSON	09B
BRAZOS, JOHN C	PETTIS	178
BREGANT, ROBT E	COLE	058
BREMER, RITA F	ST. LOUIS METROP.	190
BREMSER, HARRY L	ST. LOUIS METROP.	190
BRENNAN, DANL J	ST. LOUIS METROP.	190
BRENNAN, GEO A	ST. LOUIS METROP.	190
BRENNAN, RICAHRO J	BUCHANAN	030
BRENNAN, ROBT A	ST. LOUIS METROP.	190
BRENNAN, ROBT V	ST. LOUIS METROP.	190
BRENNER, PAUL A	F-G-W	074
BRENT, LANNY R	GREENE COUNTY	082
BRERETON, ROBT L	ST. LOUIS METROP.	190
BRESHEARS, EDWIN D	CALLAWAY	038
BRIAN, WM J	GREENE COUNTY	0B2
BRICK, JEFFREY M	JACKSON	09B
BRICKER, EUGENE M	ST. LOUIS METROP.	190
BRIELMAIER, CHARLES	ST. LOUIS METROP.	190
BRIGHAM, DAVID W	ST. LOUIS METROP.	190
BRIGHT, JAMES E	GREENE COUNTY	082
BRIMMO, A I	ST. LOUIS METROP.	190
BRION, PACELLI E	ST. LOUIS METROP.	190
BRISCOE, JOHN R	ST. LOUIS METROP.	190
BRISTOW, ROBT B	BUCHANAN	030
BROAODUS, LOREN E	GREENE COUNTY	082
BROCK, ARTHUR L	JACKSON	098
BRODEUR, ARMAND E	ST. LOUIS METROP.	190
BRODKEY, MARK J	JACKSON	098
BRODY, ARNOLD G	ST. LOUIS METROP.	190
BRONSON, SHAEL S	ST. LOUIS METROP.	190
BROOK, CHARLES J	JACKSON	098
BROOKES, ROBT D	ST. LOUIS METROP.	190
BROOKRESON, ALTON D	B-W-R-C	034
BROOKS, CHARLES S	BOONE	0
BROOKS, JOHN E	GREENE COUNTY	0
BROUN, GORONWY O	ST. LOUIS METROP.	1
BROWER, CLYDE L	JACKSON	0
BROWN, AORIAN J	JACKSON	0
BROWN, CRAIG J	BOONE	0
BROWN, OAVID W	GREENE COUNTY	0
BROWN, ELWYN S	JACKSON	0
BROWN, FREDERICK B	OZARKS	1
BROWN, IRWIN S	JACKSON	0
BROWN, JAMES M	ST. LOUIS METROP.	1
BROWN, JAMES T	GREENE COUNTY	0
BROWN, JOHN J	CALLAWAY	0
BROWN, KATHERINE S	CALLAWAY	0
BROWN, MENZIE H	JACKSON	0
BROWN, MERLIN D	BUCHANAN	0
BROWN, ROBT S	JACKSON	0
BROWN, SEYMOUR	ST. LOUIS METROP.	1
BROWN, VIOLETA O	JACKSON	0
BROWNE, JON E	JACKSON	0
BROWNING, RONALD A	JASPER	1
BROWNSBERGER, ROBT H	WEST CENTRAL	2
BROYLES, WATKINS A	GRAND RIVER	0
BRUCE, HELEN M	ST. LOUIS METROP.	1
BRUCE, LEO A	SEMO	2
BRUKARDT, DIANE T	BOONE	0
BRUMM, LAWRENCE W	JACKSON	0
BRUNER, CLAUOE R	BOONE	0
BRUNER, ROBT E	JACKSON	0
BRUNS, KENNETH	ST. LOUIS METROP.	1
BRYAN, JAMES H	ST. LOUIS METROP.	1
BRYAN, WM H	JACKSON	0
BRYAN, WM T	ST. LOUIS METROP.	1
BRYANT, SYDNEY L	BUCHANAN	0
BRYANT, T J	JACKSON	0
BUBEN, ROBT W	M-R-S	1
BUCHANAN, BARBARA N	JACKSON	0
BUCHER, WILLIAM C	BOONE	0
BUCKNER, ROBT C	JACKSON	0
BUCY, JAMES G	ST. LOUIS METROP.	1
BUDD, JOHN J	ST. LOUIS METROP.	1
BUDKE, HAROLD A	JACKSON	0
BUEHLER, CARL T	LAKE OF THE OZARKS	1
BUETTNER, JOHN B	ST. LOUIS METROP.	1
BUHLER, VICTOR B	JACKSON	0
BUIE, BRUCE R	JACKSON	0
BUKSTEIN, MICHAEL J	M-R-S	1
BUMGARNER, JAMES E	BOONE	0
BUMGARNER, ROGER W	BOONE	0
BUNTING, WILLISTON P	JACKSON	0
BURCH, JOHN E	JASPER	1
BURCHAM, TOM R	CAPE GIRARDEAU	0
BURDE, RONALD M	ST. LOUIS METROP.	1
BURDGE, ROBERT E	ST. LOUIS METROP.	1
BURFORD, EDWIN K	CAPE GIRARDEAU	0

URGESS, DEAN	ST. LOUIS METROP.	190
URK, EMMETT K	CLAY	050
URKE, ROBT J	ST. LOUIS METROP.	190
URKEY, JORDAN W	GREENE COUNTY	082
URKHART, EDWARD F	ST. LOUIS METROP.	190
URLEIGH, BRUCE W	JASPER	102
URMEISTER, RAY W	ST. LOUIS METROP.	190
URNS, FRANCIS J	ST. LOUIS METROP.	190
URNS, FRANCIS R	M-R-S	130
URNS, J R	ST. LOUIS METROP.	190
URNS, THOS W	BOONE	026
URNSIDE, CHAS R	ST. LOUIS METROP.	190
URR, DONALD C	ST. LOUIS METROP.	190
URROUGHS, NATHAN D	CLAY	050
URROWS, STEPHEN D	ST. LOUIS METROP.	190
URRY, VIRGIL F	JACKSON	098
URST, DONALD O	ST. LOUIS METROP.	190
RSTEIN, ROBT	ST. LOUIS METROP.	190
URTON, DALE F	M-R-S	130
USBY, WM E	COLE	058
USCH, ANTHONY K	ST. LOUIS METROP.	190
USIEK, ERWIN F	GREENE COUNTY	082
USIEK, PAUL J	GREENE COUNTY	082
USIEK, URBAN J	GREENE COUNTY	082
USSE, PAUL	ST. LOUIS METROP.	190
USSMAN, YVONNE C	GREENE COUNTY	082
USSMANN, DONALD W	ST. LOUIS METROP.	190
USSMANN, DONALD W	GREENE COUNTY	082
USTOS, JONAS G	JACKSON	098
UTCHER, HARVEY R	ST. LOUIS METROP.	190
UTCHER, ROBT W	JACKSON	098
UTLER, CHARLES F	GREENE COUNTY	082
TLER, ELZA F	BUCHANAN	030
UTNER, MICHAEL R	SALINE	198
UTSCH, RICHARD H	ST. LOUIS METROP.	190
UTT, ATTA U	JACKSON	098
UTT, JAMES H	BOONE	026
UTTERWORTH, NELSON S	JACKSON	098
UTTS, JAMES D	MID-MISSOURI	182
YARS, STEVEN R	JACKSON	098
YER, JOHN A	BOONE	026
YLAND, BENJ F	NORTHWEST	158
YLAND, SAML J	MONTGOMERY	146
YNUM, WM R	BOONE	026
YRNE, PAUL A	ST. LOUIS METROP.	190
YRUM, FRITZ A	ST. LOUIS METROP.	190

C

ABANAS, JUSTO J	JACKSON	098
ABONCE, AUGUST L	ST. LOUIS METROP.	190
ABRAL, GALILEU	ST. LOUIS METROP.	190
ABRERA, TOMAS V	ST. CHARLES-LINCOLN	126
ACIOLO, CARLO P	ST. LOUIS METROP.	190
ACIOPPO, JOS E	ST. LOUIS METROP.	190
ADICE, JOHN B	ST. LOUIS METROP.	190
ADIZ-ROJOLES, ADORACION	ST. LOUIS METROP.	190
CAFFREY, RAYMOND J	JACKSON	098
CAIN, A S	JACKSON	098
CAIN, ALVIN R	BARTON	018
CAJILI, ANTONIO T	ST. LOUIS METROP.	190
CALDWELL, FRED	B-W-R-C	034
CALDWELL, JOHN K	JACKSON	098
CALHOUN, TERRY L	CLAY	050
CALLAGHAN, GERARD M	ST. LOUIS METROP.	190
CALLAHAN, DANIEL	ST. LOUIS METROP.	190
CALLAHAN, DONALD E	ST. LOUIS METROP.	190
CALLAHAN, JOS D	ST. LOUIS METROP.	190
CALLAWAY, GUY D	GREENE COUNTY	082
CALLEN, KENNETH E	BOONE	026
CALLIHAN, CHARLES F	SOUTH CENTRAL	206
CALMAN, CARL H	ST. LOUIS METROP.	190
CALODNEY, MARTIN M	ST. LOUIS METROP.	190
CALOVICH, EMERY R	JACKSON	098
CAMACHO, HOMERO	JACKSON	098
CAMEL, H M	ST. LOUIS METROP.	190
CAMP, RICHARD V	B-W-R-C	034
CAMPBELL, ALBERT J	PETTIS	178
CAMPBELL, DANIEL C	OZARKS	166
CAMPBELL, EDWARD D	CAPE GIRARDEAU	042
CAMPBELL, FREDERICK B	JACKSON	098
CAMPBELL, JAMES E	C-M-M-R	046
CAMPBELL, JAMES W	SEMO	202
CAMPBELL, JOHN G	JACKSON	098
CAMPOS, FRANCISCO J	ST. LOUIS METROP.	190
CANAAN, SAML A	ST. LOUIS METROP.	190
CANCELADA, JUAN V	MINERAL AREA	138
CANENT, RAMON V	JACKSON	098
CANLAS, ARSENIO L	ST. LOUIS METROP.	190
CANLAS, EMILIO M	B-W-R-C	034
CANLAS, MARIO P	GREENE COUNTY	082
CANNON, EDWARD M	ST. LOUIS METROP.	190
CANOY, LOLITA M	BOONE	026
CANOY, NESTOR R	BOONE	026
CANTOR, HARVEY E	ST. LOUIS METROP.	190
CANTY, EUGENE J	ST. CHARLES-LINCOLN	126
CAPAPAS-WAXELMAN, L R	ST. LOUIS METROP.	190
CAPPS, EUGENE C	JACKSON	098
CARDENAS, JUAN O	ST. LOUIS METROP.	190
CARLETON, CHAS E	MINERAL AREA	138
CARLI, ALEXANDER	F-G-W	074
CARLIN, ALBERT L	NORTHWEST	158
CARLIN, M R	ST. LOUIS METROP.	190
CARLS, GARRY L	ST. LOUIS METROP.	190
CARLSON, ARNE E	ST. LOUIS METROP.	190
CARLSON, ELMER C	B-W-R-C	034
CARLSON, HJALMAR E	JACKSON	098
CARLSON, JOHN S	JACKSON	098
CARLTON, LYNN N	GREENE COUNTY	082
CARMICHAEL, KIM A	ST. LOUIS METROP.	190
CARMODY, JOHN P	ST. LOUIS METROP.	190
CARMONA, GILBERTO V	ST. LOUIS METROP.	190
CARNAHAN, CHAS E	BOONE	026
CARNELL, BILLY M	D-H-P-D	066
CARNES, VICTOR M	JASPER	102
CAROLLA, ROBERT L	BOONE	026
CARPENTER, GEO T	BUCHANAN	030
CARPENTER, JAMES L	ST. CHARLES-LINCOLN	126
CARPENTER, WALLACE	NORTHWEST	158
CARR, PHILLIP W	GREENE COUNTY	082
CARRANZA, MAURO J	ST. LOUIS METROP.	190
CARRELL, ROBERT P	GREENE COUNTY	082
CARRERA, MARIO	ST. LOUIS METROP.	190
CARRIER, JOHN A	ST. LOUIS METROP.	190
CARRINGTON, HOWARD W	LACLEDE	115
CARROLL, GEO A	ST. LOUIS METROP.	190
CARROLL, GRAYSON L	ST. LOUIS METROP.	190
CARROLL, PERCY J	ST. LOUIS METROP.	190
CARROLL, THOS W	BARTON	018
CARRON, JOSEPH	JEFFERSON	106
CARRON, OSCAR A	PERRY-STE. GENEVIEVE	174
CARSON, RICKEY R	JEFFERSON	106
CARTER, EDWIN E	ST. LOUIS METROP.	190
CARTER, JAMES E	JACKSON	098
CARTER, JAMES R	OZARKS	166
CARTER, JOHN F	ST. LOUIS METROP.	190
CARTER, RONALD D	BOONE	026
CARUSO, ALFRED A	JACKSON	098
CARY, JOHN M	ST. LOUIS METROP.	190
CASE, MARY E	ST. LOUIS METROP.	190
CASE, WM F	JACKSON	098
CASEY, EDWIN J	ST. LOUIS METROP.	190
CASEY, ELIOT C	ST. LOUIS METROP.	190
CASH, CHAS R	DUNKLIN	070
CASHIER, DWIGHT	CLAY	050
CASHMAN, JOHN W	JACKSON	098
CASON, ELBERT H	ST. LOUIS METROP.	190
CASTASUS, MANUEL A	ST. LOUIS METROP.	190
CASTER, PHILIP W	LACLEDE	115
CASTILLO, ISABELO	NORTHWEST	158
CASTILLO, MICHAEL E	CLAY	050
CASTRO, JUAN M	ST. LOUIS METROP.	190
CATANZARO, ANTHONY F	ST. LOUIS METROP.	190
CATANZARO, FRANCIS J	ST. LOUIS METROP.	190
CATANZARO, RUDOLPH E	ST. LOUIS METROP.	190
CATLETT, JACK M	JACKSON	098
CATRON, DAVID O	SEMO	202
CATTANEO, ERNEST A	JACKSON	098
CAYABYAB, PEDRO C	ST. LOUIS METROP.	190
CENTNER, PAUL J	JACKSON	098
CERZA, ROBERT F	BUCHANAN	030
CHADARATANA, PHADUNG	ST. LOUIS METROP.	190
CHAKROBORTTY, H	ST. LOUIS METROP.	190
CHALKLEY, JUDSON I	BOONE	026
CHALLENER, WM A	BUCHANAN	030
CHALLONER, DAVID R	ST. LOUIS METROP.	190
CHAMNESS, JAMES T	ST. LOUIS METROP.	190

CHANO, NAZAR	B-W-R-C	034
CHANDLER, ROBT A	JACKSON	098
CHANDRA, MAHESH	JACKSON	098
CHANG, CHIL K	BOONE	026
CHANG, DAVID Y	JACKSON	098
CHAPEL, JAMES L	BOONE	026
CHAPLIN, HUGH	ST. LOUIS METROP.	190
CHAPMAN, CHARLES L	BOONE	026
CHAPMAN, DAVID W	JACKSON	098
CHAPMAN, JEAN A	CAPE GIRARDEAU	042
CHARLES, BENJ H	ST. LOUIS METROP.	190
CHARLES, FRANCOIS	ST. LOUIS METROP.	190
CHARLES, NALLATHAMBI	JEFFERSON	106
CHARLES, PADMINI	JEFFERSON	106
CHARNAS, RAYMOND M	ST. LOUIS METROP.	190
CHASE, NED B	JASPER	102
CHASTAIN, CHAS W	MINERAL AREA	138
CHATKUPT, SUTHON	CLAY	050
CHAUDHARY, MOHAMMAD A	JACKSON	098
CHAUDHURI, SUDHA T	JACKSON	098
CHAUDHURI, TAPAN K	JACKSON	098
CHAVALA, SUDARSAN	ST. LOUIS METROP.	190
CHAVES, RUTILLO M	ST. LOUIS METROP.	190
CHAVEZ, SALVADOR	ST. LOUIS METROP.	190
CHEEK, CHAS W	BOONE	026
CHEEK, J W	GREENE COUNTY	082
CHEHVAL, MICHAEL J	ST. LOUIS METROP.	190
CHELLAPPA, DANUKODI	JASPER	102
CHEN, I-HSIUNG	PERRY-STE. GENEVIEVE	174
CHEN, STUART	JACKSON	098
CHENG, TUAN CHOU	DUNKLIN	070
CHERNOFF, SELBERT G	JACKSON	098
CHERRE, CHAS J	ST. LOUIS METROP.	190
CHESANOW, ROBT L	ST. LOUIS METROP.	190
CHESNEY, GEO W	JASPER	102
CHEUK, SHU-SUM	ST. LOUIS METROP.	190
CHIASSON, EMMERSON C	BOONE	026
CHIEFFI, MARGARET J	ST. LOUIS METROP.	190
CHILDS, DONNALEA S	JACKSON	098
CHILDS, RICHARD M	JACKSON	098
CHILES, DAVID R	CLAY	050
CHINSKY, MURRAY	ST. LOUIS METROP.	190
CHIPONGIAN, RAUL A	ST. LOUIS METROP.	190
CHISHTI, MUHAMMAD I	ST. LOUIS METROP.	190
CHIU, TAI-MAO	ST. LOUIS METROP.	190
CHO, KYU S	ST. LOUIS METROP.	190
CHO, SOO IL	ST. LOUIS METROP.	190
CHOI, SAE R	ST. LOUIS METROP.	190
CHOU, YEN PING	ST. LOUIS METROP.	190
CHOUDHURY, M H	SOUTH CENTRAL	206
CHOUINARD, MICHAEL P	SEMO	202
CHOWDHURY, DIPAK	JACKSON	098
CHRIST, MARTIN H	BUCHANAN	030
CHRISTENSEN, HAROLD L	GREENE COUNTY	082
CHRISTIANSON, CHAS S	OZARKS	166
CHRISTY, JOHN P	B-W-R-C	034
CHRISTY, RAYMOND A	GREENE COUNTY	082
CHUA, STEVEN	ST. LOUIS METROP.	190
CHUNG, KAP-EUN	ST. LOUIS METROP.	190
CHUNG, RICHARD T	JACKSON	098
CHURCHILL, STEPHEN W	JACKSON	098
CHUSAK, RICHARD B	ST. LOUIS METROP.	190
CHUTE, WM O	C-M-M-R	046
CIAPCIAK, STANLEY J	ST. LOUIS METROP.	190
CIDIS, GERHARD W	JACKSON	098
CLARK, DAVID J	CAPE GIRARDEAU	042
CLARK, FRANK I	JASPER	102
CLARK, GRANVILLE E	JACKSON	098
CLARK, IRVING H	JACKSON	098
CLARK, KENDALL A	COLE	058
CLARK, RICHARD E	ST. LOUIS METROP.	190
CLARKE, MICHAEL J	GREENE COUNTY	082
CLARKE, MICHAEL S	GREENE COUNTY	082
CLARKE, PAUL W	CAPE GIRARDEAU	042
CLARY, WM F	GREENE COUNTY	082
CLASEMAN, WILMA W	ST. LOUIS METROP.	190
CLAWSON, JAMES W	GREENE COUNTY	082
CLAYCOMB, GERALD K	ST. LOUIS METROP.	190
CLAYTON, EDGAR L	GREENE COUNTY	082
CLAYTON, JILL M	ST. LOUIS METROP.	190
CLENDENIN, WILLIAM W	ST. LOUIS METROP.	190
CLEVER, HENRY W	ST. CHARLES-LINCOLN	126
CLEVER, VICTOR G	ST. CHARLES-LINCOLN	126
CLINE, MERLE A	JACKSON	098
CLISHAM, JOHN F	M-R-S	130
CLOTHIER, ROBT W	JACKSON	098
CLOUGH, CHAS A	JACKSON	098
COBB, JAMES R	JACKSON	098
COBB, MILTON L	ST. LOUIS METROP.	190
COBEN, LAWRENCE A	ST. LOUIS METROP.	190
COBURN, DONALD F	JACKSON	098
COCHRAN, DONALD Q	BOONE	026
COCHRAN, J R	CAPE GIRARDEAU	042
COCHRAN, THOS E	GREENE COUNTY	082
COCHRANE, JOS J	JACKSON	098
COCKERELL, SANFORD F	JACKSON	098
CODILLA, SOSTENES G	ST. LOUIS METROP.	190
COFER, THOS N	GRAND RIVER	078
COFFEE, AMOS L	SOUTH CENTRAL	206
COFFEY, RALPH R	JACKSON	098
COFFIN, THEODORE A	JACKSON	098
COHEN, EDWARD	ST. LOUIS METROP.	190
COHEN, FRANK	ST. LOUIS METROP.	190
COHEN, HARRY B	BOONE	026
COHEN, HARRY K	JACKSON	098
COHEN, HILLARD K	ST. LOUIS METROP.	190
COHEN, LAWRENCE S	JACKSON	098
COHEN, MARVIN C	JACKSON	098
COHEN, ROBERT S	ST. LOUIS METROP.	190
COHLE, RICHARD R	JASPER	102
COHRS, CLARENCE C	C-M-M-R	0
COKINGTIN, LEOVIGILDO C	JACKSON	0
COKRHAME, JACK	ST. LOUIS METROP.	1
COLBERT, ROBT S	SEMO	2
COLE, HARRY O	ST. LOUIS METROP.	1
COLE, SHERMAN W	JACKSON	0
COLE, WM R	PETTIS	1
COLEMAN, ROBT L	JACKSON	0
COLGLAZIER, MARY C	JACKSON	0
COLLER, FREDERICK C	GREENE COUNTY	0
COLLINS, DOUGLASS O	GREENE COUNTY	0
COLLINS, GRETCHEN D	C-M-M-R	0
COLLINS, JACK R	MID-MISSOURI	1
COLLINS, JOHN M	ST. LOUIS METROP.	1
COLLINS, JOHN W	JACKSON	0
COLOM, GEO A	JACKSON	0
COLOSI, NICHOLAS J	ST. LOUIS METROP.	1
COLWILL, JACK M	BOONE	0
COMAS, MANUEL R	ST. LOUIS METROP.	1
COMEAU, RICHARD J	SEMO	2
COMENS, PHILLIP	ST. LOUIS METROP.	1
COMENS, RUTH C	ST. LOUIS METROP.	1
COMER, JULIAN R	M-R-S	1
COMFORT, GEO D	AUDRAIN	01
COMMERFORD, JOHN F	ST. CHARLES-LINCOLN	1
CONANT, JAMES F	JEFFERSON	1
CONDE, GARY A	JASPER	1
CONE, ALFRED J	ST. LOUIS METROP.	19
CONE, WM D	MID-MISSOURI	1
CONGER, WILLIAM R	B-W-R-C	0
CONN, ROBT D	JACKSON	09
CONNELLY, MICHAEL W	ST. CHARLES-LINCOLN	12
CONNORS, JOHN P	ST. LOUIS METROP.	19
CONOYER, J M	ST. LOUIS METROP.	1
CONRAD, JOS A	GRAND RIVER	0
CONRAD, MARSHALL B	ST. LOUIS METROP.	19
CONRAD, RAYMOND C	GREENE COUNTY	08
CONVERY, PAUL B	ST. LOUIS METROP.	19
COOK, JAMES R	GREENE COUNTY	08
COOK, JERRY W	CLAY	05
COOK, MARVIN	ST. LOUIS METROP.	19
COOK, THOS B	LAFAYETTE-RAY	11
COOPER, BARRY R	CLAY	05
COOPER, CHAS W	COLE	05
COOPER, CLAUDE W	GREENE COUNTY	08
COOPER, CLAUDE W	SOUTH CENTRAL	20
COOPER, GARY D	CLAY	05
COOPER, JAMES F	ST. LOUIS METROP.	19
COOPER, ROBT L	JOHNSON	11
COOPER, ROBT L	JOHNSON	11
COOPER, THEODORE	ST. LOUIS METROP.	19
COOPER, THOMAS J	ST. LOUIS METROP.	19
COOPER, THOS P	ST. LOUIS METROP.	19
COOPERSTOCK, MICHAEL S	BOONE	02
COPE, JAMES C	BOONE	02

OPE, JOS S	LAFAYETTE-RAY	118
OPP, RALPH	ST. LOUIS METROP.	190
OPPINGER, THOS A	JACKSON	098
ORDAY, ROBT J	ST. LOUIS METROP.	190
ORDER, ROBT L	BUCHANAN	030
ORDONNIER, JAMES K	GREENE COUNTY	082
ORDONNIER, JUSTIN J	ST. LOUIS METROP.	190
ORONADO, MARIO A	ST. LOUIS METROP.	190
ORRIGAN, GILBERT E	ST. LOUIS METROP.	190
ORRY, FRANCIS M	GREENE COUNTY	082
ORRY, JAMES M	ST. LOUIS METROP.	190
ORTNER, MARY C	JACKSON	098
ORVALAN, JUAN C	ST. LOUIS METROP.	190
ORWIN, KENNETH D	ST. LOUIS METROP.	190
OSCIA, ROBERT L	GREENE COUNTY	082
OSTA, DOMINIC V	ST. LOUIS METROP.	190
OSTELLO, CYRIL J	ST. LOUIS METROP.	190
OSTELLO, JOS P	ST. LOUIS METROP.	190
OSTEN, WILLIAM S	ST. LOUIS METROP.	190
OSTRINO, JOS A	ST. LOUIS METROP.	190
OTTEY, JOHN H	AUDRAIN	014
OTTON, THOS R	JACKSON	098
OULSON, FOREST H	CAPE GIRARDEAU	042
OULTER, JAMES W	GREENE COUNTY	082
OURTER, GARY M	LACLEDE	115
OURTER, LARRY P	COLE	058
OVA, RENO R	ST. CHARLES-LINCOLN	126
OWAN, GEO A	JACKSON	098
OWDRY, EDMUNO V	ST. LOUIS METROP.	190
OWLES, ALAN L	BOONE	026
OX, JOHN P	BUCHANAN	030
OX, KENNETH E	JACKSON	098
OX, MARY E	ST. LOUIS METROP.	190
OX, WM A	COLE	058
OX, WM L	JACKSON	098
OXE, WM S	ST. LOUIS METROP.	190
OZART, DUANE E	ST. LOUIS METROP.	190
OZEAN, CHARLES H	CAPE GIRARDEAU	042
RADOCK, THOMAS V	ST. LOUIS METROP.	190
RAFT, GEORGE A	CALLAWAY	038
RAFTS, DAVID	ST. LOUIS METROP.	190
RAIG, ALAN G	ST. LOUIS METROP.	190
RAIG, HERBERT W	BOONE	026
RAIG, IRWIN T	JASPER	102
RAIG, OWEN W	BUCHANAN	030
RAIG, RICHARD O	BUCHANAN	030
RAIN, JAMES W	OZARKS	166
RALLE, ROBERT V	ST. LOUIS METROP.	190
RANE, JOHN B	F-G-W	074
RAWFORD, ARCHIE L	JASPER	102
RAWFORD, ORAL B	GREENE COUNTY	082
RAWFORD, ROBT M	F-G-W	074
RAWFORD-TROTTER, KATH J	ST. LOUIS METROP.	190
RAYTON, BILLY G	LAFAYETTE-RAY	118
CREECH, JOSEPH C	ST. CHARLES-LINCOLN	126
CRESPIN, STEPHEN R	ST. LOUIS METROP.	190
CRESPO, HORACIO T	ST. LOUIS METROP.	190
CRESPO, REMEDIOS R	ST. LOUIS METROP.	190
CRIGHTON, JOHN C	GREENE COUNTY	082
CRISCIONE, JAMES R	ST. LOUIS METROP.	190
CRISCIONE, JAMES S	ST. LOUIS METROP.	190
CRISPELL, LAWRENCE S	JASPER	102
CRITCHLOW, MICHAEL E	SEMO	202
CRITCHLOW, WM C	SEMO	202
CROCKETT, JAMES E	JACKSON	098
CROOM, DORWYN W	DUNKLIN	070
CROSS, ALBERT D	GRAND RIVER	078
CROSSMAN, ROBT W	ST. LOUIS METROP.	190
CROSTHWAIT, EDWARD L	GREENE COUNTY	082
CROUCH, JOHN A	BOONE	026
CROUCH, THOS T	JACKSON	098
CROW, MARTIN L	JACKSON	098
CROWE, JOHN T	CAPE GIRARDEAU	042
CROWELL, HUGH C	ST. LOUIS METROP.	190
CROWLEY, WM J	BOONE	026
CROZIER, FRANKLIN A	LAFAYETTE-RAY	118
CRUZ, ELIGIO C	ST. LOUIS METROP.	190
CRUZ, SERGIO G	OZARKS	166
CSAKI, BELA	CLAY	050
CUBILLO, ENRIQUE	ST. LOUIS METROP.	190
CUENTO, OBLENDO A	ST. LOUIS METROP.	190
CULLEY, THOMAS S	BOONE	026
CULLUM, ALBERT G	ST. LOUIS METROP.	190
CUNDIFF, HARRY C	CAPE GIRARDEAU	042
CUNNINGHAM, O D	GREENE COUNTY	082
CUNNINGHAM, EDWIN J	ST. LOUIS METROP.	190
CUNNINGHAM, MILAMARI A	8OONE	026
CUNNINGHAM, RICHARD D	GREENE COUNTY	082
CURNOW, RICHARO 8	CLAY	050
CURRAN, M D	JACKSON	098
CURRAN, TERRENCE	JACKSON	098
CURRY, MICHAEL J	ST. CHARLES-LINCOLN	126
CURTIS, JACK J	BOONE	026
CURTS, CALVIN J	JACKSON	098
CUSUMANO, JOSEPH V	ST. LOUIS METROP.	190
CUTCLIFF, DANL J	JACKSON	098
CUTLER, GORDON B	ST. LOUIS METROP.	190
CUTLER, HAROLD M	ST. LOUIS METROP.	190
CUTLER, HARRY	ST. LOUIS METROP.	190
CZEBRINSKI, EDWARD W	ST. LOUIS METROP.	190

D

DAAKE, JOHN W	ST. LOUIS METROP.	190
DAAKE, JOHN W	ST. LOUIS METROP.	190
DABBS, WILBUR D	OZARKS	166
DAGARTZIKAS, A K	ST. LOUIS METROP.	190
DAHM, CHAS H	ST. LOUIS METROP.	190
DALEY, FRANK R	GRAND RIVER	078
DALTON, ARTHUR R	ST. LOUIS METROP.	190
DALTON, TIMOTHY T	JACKSON	098
DAMES, RICHARD J	ST. LOUIS METROP.	190
OAMRON, EDWARD O	ST. CHARLES-LINCOLN	126
DAMRON, OSCAR H	JOHNSON	110
OANDRIDGE, WALTER C	JASPER	102
DANFORTH, WM H	ST. LOUIS METROP.	190
OANGANAN, CANDIOO S	ST. LOUIS METROP.	190
DANGANAN, ELEANA Q	ST. LOUIS METROP.	190
OANIELS, JOHN S	ST. LOUIS METROP.	190
DANIELSSON, ERNST P	GREENE COUNTY	082
DANIS, PETER G	ST. LOUIS METROP.	190
DANIS, RICHARD K	ST. LOUIS METROP.	190
DANKNER, ARNOLD	ST. LOUIS METROP.	190
DARNELL, OALE E	JACKSON	098
OARNELL, THOS F	BOONE	026
DAS, ARABINDA	ST. LOUIS METROP.	190
DASH, IRA	ST. LOUIS METROP.	190
DASH, UOAYA N	ST. LOUIS METROP.	190
DATTA, JYOTI S	OZARKS	166
DATTA, NARENDAR K	MINERAL AREA	138
DATUIN, ALEJANDRO M	ST. LOUIS METROP.	190
DAUGIRD, ALLEN J	8OONE	026
DAUM, HAROLD F	PETTIS	178
DAUM, WAYNE J	ST. LOUIS METROP.	190
DAUT, DONALD W	AUDRAIN	014
DAVAULT, GEO K	LAFAYETTE-RAY	118
DAVENPORT, SANDRA L	BOONE	026
DAVIDNER, MARK L	JACKSON	098
DAVIDSON, KENDRICK C	JACKSON	098
DAVIDSON, MORRIS	ST. LOUIS METROP.	190
DAVIS, C B	WEST CENTRAL	214
OAVIS, CHARLES L	ST. LOUIS METROP.	190
DAVIS, CHAS S	JASPER	102
OAVIS, DAVID	BOONE	026
OAVIS, OONALO R	JACKSON	098
DAVIS, GENE L	ST. LOUIS METROP.	190
DAVIS, HERBERT V	JACKSON	098
DAVIS, JACK M	JACKSON	098
DAVIS, JOHN M	JACKSON	098
DAVIS, KENNETH A	JACKSON	098
DAVIS, LANDIS Y	LEWIS-CLARK-SCOTLAND	122
DAVIS, LEONARD L	AUDRAIN	014
DAVIS, MARLOU	ST. CHARLES-LINCOLN	126
DAVIS, MARTIN W	ST. LOUIS METROP.	190
DAVIS, MARY A	ST. LOUIS METROP.	190
DAVIS, SHELDON	ST. LOUIS METROP.	190
DAVIS, THOMAS N	MINERAL AREA	138
DAVIS, W B	JACKSON	098
DAVIS, WILBUR L	SEMO	202
DAVIS, WM E	BOONE	026
OAVISSON, WALTER F	COLE	058
DAY, CHESTER L	JACKSON	098
DAY, ROMNEY M	BUCHANAN	030
OE CASTRO, EDWINO T	ST. LOUIS METROP.	190
DE FEO, THEODORE C	JACKSON	098
DE GENOVA, GERARD H	PERRY-STE. GENEVIEVE	174

Doctor of Osteopathy

DE JESUS CARBONEL, A	ST. LOUIS METROP.	190
DE LA TORRE, JOHN J	F-G-W	074
OE LEON, ROMUALOO V	ST. LOUIS METROP.	190
OE MOTT, JOHN O	JACKSON	098
OE MOTTE, JEANNE M	LAFAYETTE-RAY	118
OE PAUW, ARTHUR P	BOONE	026
OE TAR, BURLEIGH E	JASPER	102
OE UNGRIA, ESTELITA G	ST. LOUIS METROP.	190
OE UNGRIA, PABLO C	ST. LOUIS METROP.	190
OE VERA, ANSON E	ST. LOUIS METROP.	190
OE VIVO, DARRYL C	ST. LOUIS METROP.	190
DEAKIN, V R	ST. LOUIS METROP.	190
OEAN, FRANCIS O	HOWARO	094
OEAN, WALTER E	NORTHWEST	15B
DEBNAM, JAMES W	ST. LOUIS METROP.	190
DECANINI, JESUS M	BUCHANAN	030
OECKARO, SHELBY W	GREENE COUNTY	082
OECKERT, JAMES J	COLE	05B
OEEKEN, JAMES H	JACKSON	098
OEETHS, TONY M	ST. LOUIS METROP.	190
OEHNER, JONATHAN O	ST. LOUIS METROP.	190
DEITCHMAN, ROBT B	ST. LOUIS METROP.	190
DEL CARMEN, JAIME J	ST. LOUIS METROP.	190
DEL MURO, FRANCISCO	CLAY	050
DEL PIZZO, FEROINAND	ST. CHARLES-LINCOLN	126
DEL ROSARIO, HORACIO O	ST. LOUIS METROP.	190
DEL VALLE, FERNANDO	ST. LOUIS METROP.	190
DELANY, CLARENCE L	SOUTH CENTRAL	206
DELCAU, CAREY M	ST. LOUIS METROP.	190
OELES, VICENTE O	JEFFERSON	106
OELIGEORGES, JOHN	CLAY	050
DEMEO, ROBERT R	B-W-R-C	034
DEMPSEY, HERBERT A	JACKSON	09B
DENES, BELA	ST. LOUIS METROP.	190
DENK, ALAN F	ST. LOUIS METROP.	190
DENNER, LEE J	JACKSON	098
DENNINGHOFF, JAMES C	BOONE	026
DENNIS, WM P	MINERAL AREA	138
DENNISON, CARL F	ST. LOUIS METROP.	190
DENT, GEORGE W	MINERAL AREA	13B
DENTON, ROBT E	CLAY	050
OERNONCOURT, JOHN E	CLAY	050
DESAI, RAVINDRA S	ST. CHARLES-LINCOLN	126
DESHMUKH, MURLIDHAR R	JACKSON	09B
OESHPANDE, V	ST. LOUIS METROP.	190
DESTOUET, JUDY	ST. LOUIS METROP.	190
DETTMER, ROBT F	MINERAL AREA	13B
DEUTCH, MAX	ST. LOUIS METROP.	190
DEVINE, JOHN B	ST. LOUIS METROP.	190
DEVINE, MARK W	CLAY	050
DEVINS, GEORGE S	JACKSON	09B
DEW, THOS A	ST. LOUIS METROP.	190
DEWALD, PAUL A	ST. LOUIS METROP.	190
DEWEIN, EDWARD G	ST. LOUIS METROP.	190
DEXHEIMER, FRANK R	BOONE	026
OEXTER, JAMES O	BOONE	026
DEZA, PLARIOEL	ST. LOUIS METROP.	190
DI FILIPPO, EMIL A	ST. CHARLES-LINCOLN	126
OI LEO, SENATRO W	ST. LOUIS METROP.	190
OI PASCO, DONALO J	ST. LOUIS METROP.	190
DICK, EARL	ST. LOUIS METROP.	190
DICKHAUS, DONALD W	BOONE	026
OICKLER, OONALO J	ST. LOUIS METROP.	190
DIEHL, ANTONI M	JACKSON	098
OIEHR, MAURICE A	ST. LOUIS METROP.	190
DIEMER, PETER A	ST. LOUIS METROP.	190
OIERBERG, DALE F	ST. LOUIS METROP.	190
OIERKER, HARRY O	MINERAL AREA	13B
OIESTELHORST, JAMES A	ST. LOUIS METROP.	190
OIETERICH, RUSSELL	ST. CHARLES-LINCOLN	126
OILLARO, BURL M	ST. LOUIS METROP.	190
OILLARD, ERIN M	GREENE COUNTY	0B2
OILLS, JOS N	GREENE COUNTY	0B2
OIMONO, E G	JACKSON	098
OINKENS, JAMES A	CAPE GIRAROEAU	042
OIVELEY, REX L	JACKSON	098
DIXON, GEO O	JACKSON	098
OIXON, HERBERT K	JASPER	102
DIXON, JOHN R	GRAND RIVER	078
DIXON, VEWISER L	JACKSON	098
OIZNEY, DESMION M	NORTHWEST	158
DLABAL, LUKE J	JACKSON	098
DLABAL, LUKE J	JACKSON	098
DMYTRYK, EUGENE T	ST. LOUIS METROP.	190
DODGE, MARK	JACKSON	098
DODGE, PHILIP R	ST. LOUIS METROP.	190
DODHIA, RATILAL L	JACKSON	098
OOERHOFF, AOELIA L	COLE	058
DOERHOFF, ALAN R	COLE	05B
DOERING, ROBT W	JACKSON	098
DOISY, PHILIP P	ST. LOUIS METROP.	190
DOISY, ROBT A	ST. LOUIS METROP.	190
DOLAN, CHARLES T	CLAY	050
DOLAN, JOHN T	ST. LOUIS METROP.	190
DOMANN, DARREL O	GREENE COUNTY	082
DOMBEK, STANLEY J	JACKSON	098
DOMKE, HERBERT R	CALLAWAY	03B
DOMONO, LHERISSON	ST. LOUIS METROP.	190
DONAHOE, JAMES L	ST. LOUIS METROP.	190
DONALDSON, ROBT C	ST. LOUIS METROP.	190
DONATI, ROBT M	ST. LOUIS METROP.	190
DONLEY, LEO F	ST. LOUIS METROP.	190
DONLEY, ROBT R	OZARKS	166
DONNELL, HAROLD E	JEFFERSON	106
DONNELL, ROBT H	JEFFERSON	106
DONNELL, THOS A	JEFFERSON	106
DONOHOE, CHARLES D	JACKSON	098
DONOVAN, JOHN F	ST. LOUIS METROP.	190
DONOVAN, THOS J	ST. LOUIS METROP.	190
DOOLEY, JOS M	ST. LOUIS METROP.	190
OORSCH, ERVIN H	JACKSON	098
OORTON, ROBT K	ST. LOUIS METROP.	190
DORZAB, WILLIAM E	JACKSON	098
OOSS, LARRY L	BOONE	026
OOUCETTE, RAYMOND C	ST. LOUIS METROP.	190
OOUGHERTY, CHARLES H	ST. LOUIS METROP.	190
DOWELL, GEO H	ST. LOUIS METROP.	190
DOWELL, J L	GREENE COUNTY	082
OOWNEY, JAMES W	JACKSON	098
OOWNEY, JON P	CAPE GIRAROEAU	042
OOYLE, CHAS R	ST. LOUIS METROP.	190
ORACE, CHAS C	ST. LOUIS METROP.	190
DRAKE, AVERY A	MID-MISSOURI	182
DRAKE, ROY F	JACKSON	098
DRAKE, WM L	ST. LOUIS METROP.	190
ORANEY, THOS E	JACKSON	098
ORAPER, BERNARO L	MIO-MISSOURI	182
ORATLER, STANLEY	ST. LOUIS METROP.	190
OREHER, RICHARO L	JACKSON	098
ORESCHER, EMMETT B	ST. LOUIS METROP.	190
OREWS, ROBT C	ST. LOUIS METROP.	190
OREY, NORMAN W	ST. LOUIS METROP.	190
DREYER, CARL J	ST. LOUIS METROP.	190
DREYER, PHILIP V	C-M-M-R	046
OREYER, WM F	SOUTH CENTRAL	206
DRISKO, ROBERT M	JACKSON	098
DROWNS, BRUCE V	JACKSON	098
DROZDA, JOSEPH	ST. LOUIS METROP.	190
DRUCK, NORMAN S	ST. LOUIS METROP.	190
DU MONT, CLEMENT C	BUCHANAN	030
DU MONTIER, RENE J	ST. CHARLES-LINCOLN	126
DUBIN, SOL H	JACKSON	098
DUBUQUE, THEODORE J	ST. LOUIS METROP.	190
DUEMLER, ROBT H	ST. LOUIS METROP.	190
DUER, MILDRED C	JACKSON	098
DUERKSEN, JOSEPH J	JACKSON	098
DUFFY, FRANCIS G	ST. LOUIS METROP.	190
DUFFY, OLIVER F	GRAND RIVER	078
DUGGAN, JOHN J	ST. LOUIS METROP.	190
DUKSTEIN, WALTER G	JACKSON	098
DULING, GERALD J	ST. CHARLES-LINCOLN	126
DUMADAG, VIRGILIO P	ST. LOUIS METROP.	190
DUNAWAY, HOWARD A	SEMO	202
DUNCAN, DAVID T	ST. CHARLES-LINCOLN	126
DUNCAN, DOUGLAS M	GREENE COUNTY	082
OUNCAN, ROBT D	GREENE COUNTY	082
DUNCAN, ROLIN B	B-W-R-C	034
DUNCAN, WM H	JACKSON	098
DUNDEE, JOHN T	NORTHWEST	158
DUNHAM, ROBT H	CLAY	050
DUNLEAVY, JAMES D	JACKSON	098
DUNMIRE, GEO Q	DUNKLIN	070
DUNSHEE, ROBT E	NORTHWEST	158
DUPONT, JEAN R	SEMO	202
DUREL, JUSTIN H	ST. LOUIS METROP.	190

URIE, ROBT H	JACKSON	098
URNELL, MONAFORD D	JACKSON	098
URR, JON W	ST. LOUIS METROP.	190
URST, HENRY	CALLAWAY	038
WORKIN, SAUL	ST. LOUIS METROP.	190
WYER, FRANK X	JACKSON	098
WYER, HUGH L	JACKSON	098
Y-RAGOS, RAMON R	CLAY	050
YER, DALLAS J	ST. LOUIS METROP.	190
YER, GARY A	BUCHANAN	030
ZUNDZEV, PENCO T	ST. LOUIS METROP.	190
ZUR, JAMES R	CAPE GIRARDEAU	042

E

ACHEMPATI, RAMA G	ST. LOUIS METROP.	190
ACHEMPATI, UMA R	ST. LOUIS METROP.	190
ADES, DEE W	ST. LOUIS METROP.	190
ADES, JOS W	ST. LOUIS METROP.	190
AGLETON, MARK O	ST. LOUIS METROP.	190
ARNEST, JAMES B	JACKSON	098
ARP, RALPH K	ST. LOUIS METROP.	190
ARP, RALPH T	COLE	058
ASTON, J D	BOONE	026
BEL, EUGENE H	ST. LOUIS METROP.	190
BERLE, VINCENT L	ST. LOUIS METROP.	190
CK, BIRKLE	ST. LOUIS METROP.	190
CKER, DESIDER B	ST. LOUIS METROP.	190
CKERT, CLARENCE T	ST. LOUIS METROP.	190
DDY, RICHARD L	BOONE	026
DELE, EUGENE H	ST. LOUIS METROP.	190
DELMAN, ALAN H	ST. LOUIS METROP.	190
DMONDS, ROBT W	PETTIS	178
DWARDS, DAVID R	PETTIS	178
DWARDS, DONALD E	CAPE GIRARDEAU	042
DWARDS, FRANCIS L	OZARKS	166
DWARDS, JAMES E	ST. LOUIS METROP.	190
DWARDS, JOS C	ST. LOUIS METROP.	190
DWARDS, THEODORE F	CLAY	050
DWARDS, WALDO B	JEFFERSON	106
GAN, ROBT C	ST. LOUIS METROP.	190
GAN, THOS F	ST. LOUIS METROP.	190
GGERS, GEO W	BOONE	026
GGLESTON, DONALD E	C-M-M-R	046
GGLESTON, HARRY C	ST. LOUIS METROP.	190
GGLESTON, THOS F	ST. LOUIS METROP.	190
HRLICH, CARL F	ST. LOUIS METROP.	190
IDELMAN, JACK R	ST. LOUIS METROP.	190
IMER, CHAS E	ST. LOUIS METROP.	190
ISEMANN, GUSTAVE	JACKSON	098
ISEN, ARTHUR Z	ST. LOUIS METROP.	190
ISENMANN, BENJ P	F-G-W	074
ISENSTADT, MICHAEL L	ST. LOUIS METROP.	190
KERN, HERMAN P	AUDRAIN	014
KLUND, ALFRED W	WEST CENTRAL	214
LDENBURG, DONALD O	PETTIS	178
ELDERS, FRANK A	MID-MISSOURI	182
ELIAS, DAVID J	JACKSON	098
ELIASSON, SVEN G	ST. LOUIS METROP.	190
ELISCU, JULIETTE M	JASPER	102
ELKINS, RONALD F	GREENE COUNTY	082
ELLENBOGEN, CHARLES	JACKSON	098
ELLER, CHAS H	ST. LOUIS METROP.	190
ELLER, GORDON W	CAPE GIRARDEAU	042
ELLERSIECK, DOROTHY M	ST. LOUIS METROP.	190
ELLETT, WM H	WEST CENTRAL	214
ELLFELDT, HOWARD J	JACKSON	098
ELLIOTT, RAYMOND G	JACKSON	098
ELLIOTT, WADE E	JACKSON	098
ELLIS, DAVID L	JACKSON	098
ELLIS, FRANCIS J	GREENE COUNTY	082
ELLIS, HARRY L	GREENE COUNTY	082
ELLIS, JEFFREY J	ST. LOUIS METROP.	190
ELLSASSER, JAMES C	ST. LOUIS METROP.	190
ELLSWORTH, WILLARD	GRAND RIVER	078
ELROD, DENNIS B	CAPE GIRARDEAU	042
ELSER, OTTO H	JACKSON	098
ELSON, JULIUS	ST. LOUIS METROP.	190
ELYASSI, HEDAYATOLLAH	BOONE	026
EMERAN, GEORGES J	ST. LOUIS METROP.	190
EMERSON, REYNOLDS L	ST. LOUIS METROP.	190
EMERSON, WILLIAM A	ST. LOUIS METROP.	190
ENGEL, LAWRENCE P	JACKSON	098
ENGELHARDT, ROBT C	B-W-R-C	034
ENGELMANN, CALVIN E	JACKSON	098
ENGLEMAN, REINHOLD	JACKSON	098
ENGLISH, MILTON T	NORTH CENTRAL	162
ENGLISH, WALLACE D	DUNKLIN	070
ENKVETCHAKUL, BOONMEE	GREENE COUNTY	082
EPSTEIN, JAMES M	ST. LOUIS METROP.	190
ERICKSON, HARTLEY J	PETTIS	178
ERICSSON, SAML E	JACKSON	098
ERNST, EDWIN C	ST. LOUIS METROP.	190
ERNST, JOS G	ST. LOUIS METROP.	190
ERNST, RICHARD E	ST. LOUIS METROP.	190
ERNST, ROLAND P	ST. LOUIS METROP.	190
ERVIN, JOHN E	JACKSON	098
ESCOBAR, NELSON G	BUCHANAN	030
ESCOBEDO, BOLIVAR M	ST. LOUIS METROP.	190
ESCOFFERY, RICHARD F	ST. LOUIS METROP.	190
ESHELMAN, ALBERT O	JACKSON	098
ESPARRAGO, F R	OZARKS	166
ESPINOSA, TOMAS	B-W-R-C	034
ESSLINGER, ARTHUR T	ST. LOUIS METROP.	190
ESSMEYER, JOSEPH K	CAPE GIRARDEAU	042
ESTERLY, JAMES A	BOONE	026
ESTES, JACK M	ST. LOUIS METROP.	190
ESTHER, JOHN R	JASPER	102
ESTRADA, CORAZON D	ST. LOUIS METROP.	190
ESTRADA, JESUS I	ST. LOUIS METROP.	190
ETHEREDGE, EDWARD E	ST. LOUIS METROP.	190
ETIENNE, ROBT B	ST. LOUIS METROP.	190
ETO, JACKSON K	ST. LOUIS METROP.	190
EUBANK, DAVID F	JACKSON	098
EUBANK, DILLARD M	JACKSON	098
EUBANK, WM Y	JACKSON	098
EUGENIO, ROMEO R	PERRY-STE. GENEVIEVE	174
EUPRASERT, PRICHA	JACKSON	098
EVANS, EZRA L	GREENE COUNTY	082
EVANS, JOS C	JACKSON	098
EVANS, LAWRENCE G	ST. LOUIS METROP.	190
EVANS, LAWRENCE L	JACKSON	098
EVENS, RONALD G	ST. LOUIS METROP.	190
*EVERETT, JAMES E	JACKSON	098
EVERSOLL, NORTON J	ST. LOUIS METROP.	190
EXARHOU, KLARK	ST. LOUIS METROP.	190
EXON, C S	COLE	058
EYERMAN, EDWARD L	ST. LOUIS METROP.	190
EYERMANN, HENRY W	F-G-W	074

F

FABIAN, LEONARD W	ST. LOUIS METROP.	190
FABITO, DANIEL C	ST. LOUIS METROP.	190
FABITO, MELINDA A	ST. LOUIS METROP.	190
FAIR, WM L	GRAND RIVER	078
FAIR, WM R	ST. LOUIS METROP.	190
FAIRCHILD, JAMES F	PERRY-STE. GENEVIEVE	174
FAIRCHILD, ROBT C	JACKSON	098
FAJATIN, ROMULO J	ST. LOUIS METROP.	190
FAKHOURY, DONALD A	CLAY	050
FALLON, RICHARD H	ST. LOUIS METROP.	190
FALZONE, JOHN J	COLE	058
FARAON, JOSE B	JACKSON	098
FARBER, BARRY S	GREENE COUNTY	082
FARBERMAN, ELLIOTT	ST. LOUIS METROP.	190
FARKAS, JAMES R	PETTIS	178
FARMER, NORMA P	MINERAL AREA	138
FARNHAM, MILO M	JACKSON	098
FARRELL, CORINNE	BOONE	026
FARRELL, JOHN S	ST. LOUIS METROP.	190
FARRELL, ROBT J	ST. LOUIS METROP.	190
FARRELL, SAMMY L	F-G-W	074
FARRIS, LARRY E	B-W-R-C	034
FARTHING, GENE W	GREENE COUNTY	082
FARZANA, FARIDA	ST. LOUIS METROP.	190
FATHMAN, ANTHONY E	ST. LOUIS METROP.	190
FAVAZZA, ARMANDO R	BOONE	026
FAYEZ, JAMIL A	JACKSON	098
FAYNE, FRED A	JACKSON	098
FEDOTIN, MICHAEL S	JACKSON	098
FEE, CHESTER F	JACKSON	098
FEIBEL, ROBT M	ST. LOUIS METROP.	190
FEIND, EARL E	MID-MISSOURI	182
FEIST, GEO V	JACKSON	098
FEIST, WM E	JACKSON	098
FELDER, JAMES P	ST. CHARLES-LINCOLN	126
FELDMAN, DAVID	ST. LOUIS METROP.	190

Doctor of Osteopathy

FELICIANO, WILFRIDO C	ST. LOUIS METROP.	190
FELIX, ROBT H	ST. LOUIS METROP.	190
FELKER, J. R	CAPE GIRARDEAU	042
FELLER, HAROLD H	ST. LOUIS METROP.	190
FELLHAUER, CARL M	ST. LOUIS METROP.	190
FELTS, JAMES A	ST. LOUIS METROP.	190
FELTZ, LAWRENCE W	PERRY-STE. GENEVIEVE	174
FERGUSON, DONALD S	JACKSON	098
FERGUSON, JOHN F	GREENE COUNTY	082
FERGUSON, JOHN L	GREENE COUNTY	082
FERGUSON, JOHN P	GREENE COUNTY	082
FERGUSON, ROBT M	JASPER	102
FERGUSON, THOS B	ST. LOUIS METROP.	190
FERNANDEZ, FERNANDO	8UCHANAN	030
FERNEAU, JAMES E	BOONE	026
FERRELL, THOS E	GREENE COUNTY	082
FERRENDELLI, JAMES A	ST. LOUIS METROP.	190
FERRIS, CARYL R	JACKSON	098
FERRO, ANTHONY L	ST. LOUIS METROP.	190
FERRY, RICHARD J	ST. LOUIS METROP.	190
FETICK, PAUL G	ST. LOUIS METROP.	190
FEUTZ, EDWARD P	ST. LOUIS METROP.	190
FIBUCH, EUGENE E	JACKSON	098
FIGUEROA, EDDUYN	ST. LOUIS METROP.	190
FIGUEROA, ELISEO O	ST. LOUIS METROP.	190
FILES, JAMES 8	COLE	058
FILIP, ALEXANDER J	JACKSON	098
FINGER, DONALD H	ST. LOUIS METROP.	190
FINGERHOOD, MARVIN G	ST. LOUIS METROP.	190
FINGERT, HYMAN H	ST. LOUIS METROP.	190
FINK, LE R	ST. LOUIS METROP.	190
FINK, ROGER L	GREENE COUNTY	082
FINKEL, BARNEY W	ST. LOUIS METROP.	190
FINKLE, ROBERT H	JACKSON	098
FINN, MURRAY E	ST. LOUIS METROP.	190
FINNEGAN, JOS V	ST. LOUIS METROP.	190
FIORDELISI, ROCCO J	ST. LOUIS METROP.	190
FISCHER, EDWARD H	CLAY	050
FISCHER, JOHN R	ST. LOUIS METROP.	190
FISCHER, JOSE M	CLAY	050
FISCHER, MARTIN J	BUCHANAN	030
FISCHER, THEODORE	PERRY-STE. GENEVIEVE	174
FISH, RICHARD G	ST. LOUIS METROP.	190
FISH, VIRGIL O	ST. LOUIS METROP.	190
FISHER, JAMES K	JACKSON	098
FISHER, JOS L	8UCHANAN	030
FISHER, LINDA	ST. LOUIS METROP.	190
FISHER, STANLEY D	PETTIS	178
FISHMAN, JOHN J	ST. LOUIS METROP.	190
FISHMAN, MARVIN A	ST. LOUIS METROP.	190
FITCH, C H	GREENE COUNTY	082
FITCH, COY D	ST. LOUIS METROP.	190
FITE, JAMES E	GREENE COUNTY	082
FITZ SIMMONS, JAMES G	JACKSON	098
FITZGERALD, LEO P	ST. LOUIS METROP.	190

FITZGERALD, ROBERT H	JACKSON	098
FITZGERALD, WM T	ST. LOUIS METROP.	190
FIVIAN, GERALD J	ST. LOUIS METROP.	190
FLANCE, ISRAEL J	ST. LOUIS METROP.	190
FLANDERS, VIRGIL E	CLAY	050
FLANIGAN, GEO D	ST. LOUIS METROP.	190
FLATLEY, JOHN A	JACKSON	098
FLEISHMAN, ALFRED	ST. LOUIS METROP.	190
FLEMING, ALLAN R	JACKSON	098
FLEMING, JACOB W	C-M-M-R	046
FLEMING, ROBT J	ST. CHARLES-LINCOLN	126
FLEMING, THOS S	C-M-M-R	046
FLETCHER, ROBERT C	JACKSON	098
FLETES, JAMES W	ST. LOUIS METROP.	190
FLORENDO, FEDERICO N	M-R-S	130
FLORENDO, PURIFICACION T	M-R-S	130
FLORES-VEGA, CARLOS H	ST. LOUIS METROP.	190
FLORO, MARIANO N	ST. LOUIS METROP.	190
FLOTTE, BERNARD H	ST. LOUIS METROP.	190
FLOTTE, SYLVESTER A	ST. LOUIS METROP.	190
FLUG, ERIC J	ST. LOUIS METROP.	190
FLYNN, EDWARD P	ST. LOUIS METROP.	190
FLYNN, JAMES M	JACKSON	098
FLYNN, JOHN T	ST. LOUIS METROP.	190
FLYNN, JOS E	ST. LOUIS METROP.	190
FLYNN, THOMAS T	ST. LOUIS METROP.	190
FOGARTY, WM M	ST. LOUIS METROP.	190
FOGERSON, VIRGINIA L	GREENE COUNTY	082
FOGLE, PHILIP R	GREENE COUNTY	082
FOLCK, WM P	JACKSON	098
FOLKNER, ALBERT L	JOHNSON	110
FOOTE, JERRY E	BOONE	026
FORD, LEE T	ST. LOUIS METROP.	190
FORD, THOMAS E	ST. LOUIS METROP.	190
FOREMAN, PHILLIP B	M-R-S	130
FORGUE, DONALD R	JACKSON	098
FORMAN, GEO W	BUCHANAN	030
FORMAN, LOUIS H	JACKSON	098
FORSEN, JAMES A	ST. LOUIS METROP.	190
FORSMAN, WALDO W	ST. LOUIS METROP.	190
FORSYTH, 8RUCE T	ST. LOUIS METROP.	190
FORSYTHE, LEES C	JACKSON	098
FORSYTHE, ROBT W	JACKSON	098
FORTI, JOHN J	ST. LOUIS METROP.	190
FORTIN, DON G	CLAY	050
FORTIN, FELIX D	JACKSON	098
FORTIN, JORGE A	MID-MISSOURI	182
FOTOPOULOS, CHRIS K	LAKE OF THE OZARKS	120
FOUTS, DALLAS 8	JACKSON	098
FOWLER, FRED D	JACKSON	098
FOWLER, I C	CLAY	050
FOWLER, JAMES W	JACKSON	098
FOWLER, MARVIN L	SOUTH CENTRAL	206
FOX, GERALD E	BUCHANAN	030
FOX, LEON J	ST. LOUIS METROP.	190

FOX, ROBT E	ST. LOUIS METROP.	1
FRAKES, JAMES T	BOONE	0
FRANCIS, WILLIAM C	GREENE COUNTY	0
FRANCISCO, CLARENCE B	JACKSON	0
FRANCISCO, DOMINIC S	ST. LOUIS METROP.	1
FRANCISCO, EDGARDO C	WEST CENTRAL	2
FRANCO, PILAR J	JACKSON	0
FRANK, ALVIN R	ST. LOUIS METROP.	1
FRANK, GAEL R	JACKSON	0
FRANKLIN, CURTIS U	JACKSON	0
FRANKLIN, HAROLD A	ST. LOUIS METROP.	1
FRANKLIN, MAX S	ST. LOUIS METROP.	1
FRASER, DANL M	ST. LOUIS METROP.	1
FRASER, RICHARD A	B-W-R-C	0
FRAWLEY, THOS F	ST. LOUIS METROP.	1
FRAZIER, ROBT E	BOONE	0
FRAZIER, ROBT L	SEMO	2
FREDERICK, RAYMOND O	ST. LOUIS METROP.	1
FREEDMAN, RUTH S	ST. LOUIS METROP.	1
FREEMAN, DAVID M	ST. LOUIS METROP.	1
FREEMAN, JAMES A	BOONE	0
FREEMAN, JERRY C	JACKSON	0
FREEMAN, RICHARD	ST. LOUIS METROP.	1
FREIDEN, FLOYD J	JACKSON	0
FREIMAN, SEYMOUR M	ST. LOUIS METROP.	1
FREIN, DONALD E	WEST CENTRAL	2
FREUND, SAML J	ST. LOUIS METROP.	1
FRIEDMAN, IRA J	ST. LOUIS METROP.	1
FRIEDMAN, MORRIS L	JACKSON	0
FRIEDMAN, PAUL L	ST. LOUIS METROP.	1
FRIEDMAN, ROBT H	ST. LOUIS METROP.	1
FRIEDMAN, WILLIAM H	ST. LOUIS METROP.	1
FRIEDRICH, ANTHONY P	ST. LOUIS METROP.	1
FRIEDRICH, ERNST R	ST. LOUIS METROP.	1
FRIES, ARMAND D	ST. LOUIS METROP.	1
FRIES, JOHN W	ST. LOUIS METROP.	1
FRISKEL, ARTHUR K	ST. LOUIS METROP.	1
FRISTOE, FRANK H	BOONE	0
FRITSCH, ANDREW J	JASPER	1
FRITZLEN, THOS J	JACKSON	0
FROELICH, EDWIN J	ST. LOUIS METROP.	1
FROELICH, RAE W	LACLEDE	1
FROGGE, JIMMY D	JASPER	1
FRUEH, 8ARTLEY R	BOONE	0
FRUMSON, GUY H	ST. LOUIS METROP.	1
FRYER, MINOT P	ST. LOUIS METROP.	1
FUCHS, GEO J	8OONE	0
FUHRMAN, DONALD L	JACKSON	0
FUJITA, MILTON T	ST. LOUIS METROP.	1
FULEIHAN, FARID M	ST. LOUIS METROP.	1
FULKS, RICHARD B	MONITEAU	1
FULLGRABE, EMIL A	COLE	0
FUNSCH, ROBERT E	ST. LOUIS METROP.	1
FURLA, GUS J	ST. LOUIS METROP.	1
FURLONG, LAWRENCE D	JACKSON	0

URLDW, LEONARD T	ST. LDUIS METROP.	190
USDN, LEVI H	BUCHANAN	030
USDN, WM A	GRAND RIVER	078

G

ADDR, FRANCISCO A	JACKSON	098
AFFNEY, CALDWELL J	ST. LOUIS METROP.	190
AFNEY, GED T	ST. LOUIS METROP.	190
AGLIARDO, JOSEPH	ST. LDUIS METROP.	190
AINES, ROBERT W	8OONE	026
AINEY, HAROLD L	JACKSDN	098
AITDNDE, MANGESH R	JACKSDN	098
ALAKATDS, ANDREW E	ST. LOUIS METRDP.	190
ALAN, ALEJANORO A	ST. LOUIS METROP.	190
ALBDL, HARLEY I	CLAY	050
ALBREATH, ASHFORO M	JACKSON	098
ALE, ARTHUR H	ST. LOUIS METROP.	190
ALE, JOS F	GRANO RIVER	078
ALINSKY, LEON J	DZARKS	166
ALL, ALAN M	ST. LOUIS METROP.	190
ALL, IRA C	ST. LOUIS METROP.	190
ALLAGHER, LIONEL M	MONITEAU	142
ALVEZ, SISENANOO P	GRAND RIVER	078
AM8ILL, ALICE F	BOONE	026
ANDLMAYR, JACO8 M	ST. LOUIS METROP.	190
ANSLOSER, WILBERT M	ST. LOUIS METROP.	190
ANTNER, GEO E	ST. LOUIS METROP.	190
ANTZ, JOHN A	ST. LOUIS METROP.	190
APASIN, ERNESTO M	LACLEDE	115
ARAS, GAMAL	ST. LOUIS METROP.	190
ARCIA, CHAS L	AUDRAIN	014
ARCIA-FERRER, EOUAROO A	ST. LOUIS METROP.	190
ARD, RAYMONO F	JACKSON	098
ARDNER, JOS A	JASPER	102
ARDNER, JOS W	OZARKS	166
ARFINKEL, BERNARD T	ST. LOUIS METROP.	190
ARNER, JAMES H	JACKSON	098
ARNER, LYNN M	COLE	058
ARNER, ROYAL S	COLE	058
ARRETT, GLEN H	BOONE	026
ARRIDO, OANTE O	BUCHANAN	030
ARRIGA, FRANCISCO J	ST. LOUIS METROP.	190
ARRISON, OAVIO L	BUCHANAN	030
ARRISON, ROY F	JACKSON	098
ARRISON, THEOOORE W	LAKE OF THE OZARKS	120
ARROTTO, LEWIS J	BOONE	026
ARY, GEO	GRAND RIVER	078
ASKA, WALTER J	GREENE COUNTY	082
ASKINS, JOHN H	JACKSON	098
ASTON, LAMONT W	BOONE	026
ASTON, SAML L	JASPER	102
AUER, ROBT J	CLAY	050
AUNT, WM O	BDONE	026
AUTHIER, CHARLES P	JACKSON	098
AVINI, RAJENORA R	ST. LOUIS METROP.	190
GEARHART, DAVID L	ST. LDUIS METROP.	190
GEARHART, MERRIAM	GRAND RIVER	078
GEARHART, WILBUR H	ST. LOUIS METRDP.	190
GEDNEY, WM B	ST. LOUIS METRDP.	190
GEHA, BRAHAM J	JACKSON	098
GEHM, LOUIS E	WEST CENTRAL	214
GEIGER, WM A	JACKSON	098
GEISE, AUGUST W	ST. LOUIS METRDP.	190
GEISSE, GUILLERMD	ST. LOUIS METROP.	190
GELLMAN, ELLIOT F	ST. LOUIS METROP.	190
GEMPEL, PAUL A	JACKSDN	098
GENTRY, ENOCH N	JACKSDN	098
GENTRY, MARVIN C	SOUTH CENTRAL	206
GENTRY, MICHAEL A	GREENE COUNTY	082
GENTSCH, KENNETH W	ST. LOUIS METROP.	190
GEORGE, PHILIP G	ST. LOUIS METROP.	190
GEORGE, THEOOORE	LAFAYETTE-RAY	118
GERAGHTY, THOMAS E	CLAY	050
GERDES, JOHN A	GREENE COUNTY	082
GERMAN, WALTER A	GREENE COUNTY	082
GERMANN, OONALO R	JACKSON	098
GERMUTH, FREDERICK G	ST. LOUIS METROP.	190
GERNSTETTER, S L	B-W-R-C	034
GEROWIN, LANCE	ST. LOUIS METROP.	190
GERST, ALOYSIUS C	ST. LOUIS METROP.	190
GERST, JAMES	ST. LOUIS METROP.	190
GHOLKAR, VIJAY R	JACKSON	098
GHOSH, NELLIE	ST. LOUIS METROP.	190
GHOSH, RANENORA B	BUCHANAN	030
GIBBONS, RO8T T	JACKSON	098
GIBSON, OAVID M	JACKSON	098
GIBSTINE, MARVIN H	ST. LOUIS METROP.	190
GIDDINGS, FRANK C	GREENE COUNTY	082
GIESELMAN, RALPH V	ST. LOUIS METROP.	190
*GIFFEN, LAWRENCE E	COLE	058
GILOEN, JEROME J	ST. LOUIS METROP.	190
*GILGORE, ALFREO	JACKSON	098
GILL, PAUL J	GREENE COUNTY	082
GILLILANO, CHAS E	GRANO RIVER	078
GILLISPIE, ROY	OZARKS	166
GILPIN, OORIS C	ST. LOUIS METROP.	190
GILULA, LOUIS A	ST. LOUIS METROP.	190
GINARDI, DONALD E	JACKSON	098
GINSBERG, NORMAN A	JACKSON	098
GINSBURG, JOROAN H	ST. LOUIS METROP.	190
GINTHER, JAMES W	ST. LOUIS METROP.	190
GIRAPARNONT, BANG-ORN	ST. LOUIS METROP.	190
GIRAPARNONT, PRABHAK	ST. LOUIS METROP.	190
GISH, E R	CALLAWAY	038
GIST, WM W	JACKSON	098
GIVLER, ROBT L	JACKSON	098
GLADNEY, JOHN H	ST. LOUIS METROP.	190
GLASER, LARRY F	JACKSON	098
GLASS, ROBT L	PETTIS	178
GLASS, WM J	OZARKS	166
GLASSCOCK, ERNEST L	JACKSON	098
GLATTER, THOMAS R	JACKSON	098
GLAZER, MELVIN L	JACKSON	098
GLENN, EDWARO A	PIKE	186
GLENN, THEODORE J	CAPE GIRAROEAU	042
GLINES, MICHAEL H	ST. LOUIS METROP.	190
GLDVER, JACK F	GREENE COUNTY	082
GLDVER, WM A	OZARKS	166
GLUCK, DSCAR S	ST. LOUIS METRDP.	190
GNADE, ALBERT J	ST. LOUIS METROP.	190
GDEBEL, JDAN M	ST. LOUIS METROP.	190
GOELL, RDBT S	ST. LDUIS METRDP.	190
GOERZ, ANN A	JACKSON	098
GOERZ, ROYAL D	JACKSON	098
GOETZ, KENNETH L	JACKSON	098
GOHEEN, JOHN R	JACKSON	098
GOLO, JONATHAN A	ST. LOUIS METROP.	190
GOLDFARB, ALVIN	ST. LOUIS METROP.	190
GOLOGABER, ALBERTO	ST. LOUIS METROP.	190
GOLDKAMP, JOHN O	ST. CHARLES-LINCOLN	126
GOLOMAN, ARNOLO M	ST. LOUIS METROP.	190
GOLOMAN, GOROON M	ST. LOUIS METROP.	190
GOLOMAN, HYMEN J	ST. LOUIS METROP.	190
GOLOMAN, JACK	ST. LOUIS METROP.	190
GOLOMAN, MELVIN L	ST. LOUIS METROP.	190
GOLOMAN, STANLEY L	JACKSON	098
GOLORING, OAVID	ST. LOUIS METROP.	190
GOLDRING, SIDNEY	ST. LOUIS METROP.	190
GOLDSICH, EDWARO	JACKSON	098
GOLDSTEIN, BENJAMIN	ST. LOUIS METROP.	190
GOLOSTEIN, MARVIN F	JACKSON	098
GOLLUB, SAML W	ST. LOUIS METROP.	190
GOLTSCHMAN, JOHN P	ST. LOUIS METROP.	190
GOMEZ, CESAR A	ST. LOUIS METROP.	190
GONDRING, WILLIAM H	BUCHANAN	030
GONZALES, JOSE H	PERRY-STE. GENEVIEVE	174
GONZALEZ, MARIO G	JOHNSON	110
GOODMAN, JONATHAN N	ST. LOUIS METROP.	190
GOODMAN, NATHANIEL	ST. LOUIS METROP.	190
GOOOSON, WM H	JACKSON	098
GOOLSBEE, ROBT L	JACKSON	098
GOROON, BRUCE J	BOONE	026
GOROON, JAMES M	ST. LOUIS METROP.	190
GOROON, JAMES S	COLE	058
GORE, GLENN L	ST. CHARLES-LINCOLN	126
GORLA, WAYNE O	ST. LOUIS METROP.	190
GOSE, OON F	GREENE COUNTY	082
GOTTSCH, JOSEPH C	JACKSON	098
GOWDAMARAJAN, RENGASAMY	JACKSON	098
GOWLER, OOUGLAS R	ST. LOUIS METROP.	190
GRABLE, JAMES O	PEMISCOT	170
GRACE, STEVE	GREENE COUNTY	082
GRAOY, RONALO K	ST. LOUIS METROP.	190
GRAFF, RALPH J	ST. LOUIS METROP.	190
GRAGNANI, JOHN	BOONE	026

Doctor of Osteopathy

GRAHAM, PATRICK G	JACKSON	098
GRAHAM, WALLACE H	JACKSON	098
GRANETO, JOS A	ST. LOUIS METROP.	190
GRANNEMANN, H N	MID-MISSOURI	182
GRANT, CLAUDE S	BUCHANAN	030
GRANT, JOHN M	ST. LOUIS METROP.	190
GRANT, NEVILLE	ST. LOUIS METROP.	190
GRANT, SAML B	ST. LOUIS METROP.	190
GRAUL, WALTER P	ST. LOUIS METROP.	190
GRAVES, ARTHUR J	OZARKS	166
GRAY, GARY J	ST. LOUIS METROP.	190
GRAY, JAMES E	8OONE	026
GRAY, WALTER C	MINERAL AREA	138
GREBE, T K	JASPER	102
GREBEL, CLEMENT 8	ST. LOUIS METROP.	190
GREEN, J R	JACKSON	098
GREEN, JAMES R	DUNKLIN	070
GREEN, MANUEL E	ST. LOUIS METROP.	190
GREEN, MORTON R	ST. LOUIS METROP.	190
GREEN, THOMAS F	JACKSON	098
GREEN, WM R	ST. LOUIS METROP.	190
GREENBERG, MARTIN T	JACKSON	098
GREENE, HARRY L	M-R-S	130
GREENE, W W	JACKSON	098
GREENLUND, NELSON C	WEST CENTRAL	214
GREENMAN, MARSHALL B	ST. LOUIS METROP.	190
GREGORY, JOHN G	ST. LOUIS METROP.	190
GRESICK, ROBT J	ST. LOUIS METROP.	190
GRIEGE, CHAS W	ST. LOUIS METROP.	190
GRIESEMER, BERNARD A	GREENE COUNTY	082
GRIFFIN, DONALD R	JACKSON	098
GRIFFIN, M E	D-H-P-D	066
GRIFFIN, OLIN A	O-H-P-D	066
GRIFFIN, WM T	BOONE	026
GRIFFITH, JOHN A	JACKSON	098
GRIGGS, JAMES Y	ST. LOUIS METROP.	190
GRIM, EDWARO M	JASPER	102
GRIMES, ELWYN M	JACKSON	098
GRIMES, MANNING E	BUCHANAN	030
GRINDON, JOS B	ST. LOUIS METROP.	190
GROCE, GEO D	CALLAWAY	038
GROSHONG, TED D	BOONE	026
GROTE, WALT W	CAPE GIRAROEAU	042
GROVE, GULPH W	JOHNSON	110
GROWDON, JOHN A	JACKSON	098
GRUBB, PAUL H	JASPER	102
GRUBB, ROBT L	ST. LOUIS METROP.	190
GRUNDEN, VIDALITA G	JACKSON	098
GRUNDMANN, WM H	ST. LOUIS METROP.	190
GRUNT, JEROME A	JACKSON	098
GUALBERTO, CRISANTO	AUDRAIN	014
GUASTELLO, JOS R	JACKSON	098
GUASTELLO, MARIO J	JACKSON	098
GUBIN, ALAN S	PEMISCOT	170
GUERRA, GASTON G	JACKSON	098
GUHLEMAN, HENRY V	COLE	058
GUILLEN, DIOSDAOA T	ST. LOUIS METROP.	190
GUILLEN, RODOLFO T	ST. LOUIS METROP.	190
GUKHOOL, PREMLALL	CLAY	050
GULICK, C R	ST. LOUIS METROP.	190
GULICK, CHARLES R	ST. LOUIS METROP.	190
GULLETT, CHAS C	JACKSON	098
GUMMELS, 8ELMONT 8	ST. LOUIS METROP.	190
GUNAWAROHANA, H P	ST. LOUIS METROP.	190
GUNDLE, SIGMUND	JACKSON	098
GUNN, JACK	LAKE OF THE OZARKS	120
GUNN, RICHARD W	JACKSON	098
GUNN, ROBERT W	ST. LOUIS METROP.	190
GUNN, VICTORIA	COLE	058
GUNN, WALTER T	ST. LOUIS METROP.	190
GUNTER, JOE S	BUCHANAN	030
GUPTA, B S	JACKSON	098
GUPTA, JITENDRA K	ST. LOUIS METROP.	190
GUPTA, NARAYAN C	ST. LOUIS METROP.	190
GURSAHANI, MAN MOHAN	ST. LOUIS METROP.	190
GUSTAFSON, JON E	JACKSON	098
GUTEK, EDWARD P	JACKSON	098
GUTKNECHT, RICHARD	JACKSON	098
GUTZMER, ERNEST W	GREENE COUNTY	082
GUZE, SAML B	ST. LOUIS METROP.	190
GWIN, EDWARD	GREENE COUNTY	082

H

H'DOU8LER, CHAS E	GREENE COUNTY	082
H'DOU8LER, FRANCIS T	GREENE COUNTY	082
H'OOUBLER, PETER 8	GREENE COUNTY	082
HAAS, HARRY D	JACKSON	098
HAAS, ROBERT W	CLAY	050
HABERMANN, JAMES H	JASPER	102
HABERT, EOWARO R	ST. LOUIS METROP.	190
HABIB, HENRY N	JACKSON	098
HADDOCK, JAMES N	ST. LOUIS METROP.	190
HAEN, CHAS J	GREENE COUNTY	082
HAFFNER, HEINZ E	ST. LOUIS METROP.	190
HAGAN, DANL J	ST. LOUIS METROP.	190
HAGAN, JOHN C	CLAY	050
HAGAR, DAVID L	JACKSON	098
HAGE8USCH, OMER E	ST. LOUIS METROP.	190
HAGEMANN, PAUL O	ST. LOUIS METROP.	190
HAGEN, OUANE Q	ST. LOUIS METROP.	190
HAGEN, MICHAEL D	OZARKS	166
HAHN, BRUCE H	JACKSON	098
HAHN, FREDERICK W	JACKSON	098
HAIBACH, HELMUT	BOONE	026
HAIGHT, JOHN M	JACKSON	098
HAITH, EOWARO E	JACKSON	098
HAITH, WALTER F	JACKSON	098
HALEY, TED M	CLAY	050
HALFORD, RICHARD	ST. LOUIS METROP.	190
HALL, CHAS R	LAKE OF THE OZARKS	120
HALL, DAVIO G	BOONE	0
HALL, DAVID W	GREENE COUNTY	0
HALL, DURWARD G	GREENE COUNTY	0
HALL, EUGENE W	ST. LOUIS METROP.	1
HALL, JOHN C	JACKSON	0
HALL, LEE A	ST. LOUIS METROP.	1
HALL, MARVIN F	JASPER	1
HALL, PRESTON C	ST. LOUIS METROP.	1
HALL, RALPH R	JACKSON	0
HALL, ROBT A	ST. LOUIS METROP.	1
HALL, ROBT T	JACKSON	0
HALL, STANLEY G	M-R-S	1
HALL, THOS B	JACKSON	0
HALL, WM K	ST. LOUIS METROP.	1
HALLABA, MOHEB A	JASPER	1
HALLAZGO, SANTIAGO Y	ST. LOUIS METROP.	1
HALLEY, R H	ST. LOUIS METROP.	1
HALLINGER, EARL S	ST. LOUIS METROP.	1
HALLORAN, MARK J	ST. LOUIS METROP.	1
HALPERIN, PHILLIP H	JACKSON	0
HALVERSON, JOHN O	ST. LOUIS METROP.	1
HALVERSON, LARRY W	OZARKS	1
HAMBURG, FREDERIC L	GREENE COUNTY	0
HAMILL, ROBT W	JACKSON	0
HAMILTON, CALDWELL K	ST. LOUIS METROP.	1
HAMILTON, EUGENE G	ST. LOUIS METROP.	1
HAMILTON, JOHN A	ST. LOUIS METROP.	19
HAMILTON, THOMAS R	ST. LOUIS METROP.	1
HAMILTON, WILLIAM P	ST. LOUIS METROP.	1
HAMILTON, WM P	OZARKS	16
HAMLIN, HOWARD H	JACKSON	09
HAMLIN, WYETH	M-R-S	1
HAMMES, ROMAN E	ST. CHARLES-LINCOLN	12
HAMMLER, CHRISTIANA V	MID-MISSOURI	1
HAMMOND, D W	ST. LOUIS METROP.	19
HAMMOND, DAVID T	ST. LOUIS METROP.	19
HAMPTON, STANLEY F	ST. LOUIS METROP.	19
HAN, JUNG H	CALLAWAY	03
HANAN, ERNEST B	GREENE COUNTY	08
HANAWAY, JOS	ST. LOUIS METROP.	19
HANDLER, ERIC	8UCHANAN	03
HANDLER, FRED P	COLE	05
HANES, LILY A	ST. LOUIS METROP.	19
HANKIN, NORMAN M	ST. LOUIS METROP.	19
HANNA, FAYEZ A	ST. LOUIS METROP.	19
HANNA, HUGH A	JOHNSON	11
HANNAH, HAMNER	JACKSON	09
HANNAS, RALSTON R	JACKSON	09
HANSBROUGH, EUGENE T	B-W-R-C	0
HANSEL, FRENCH K	ST. LOUIS METROP.	19
HANSEN, ARTHUR L	WEST CENTRAL	21
HANSER, THEOOORE H	ST. LOUIS METROP.	19
HANSON, E J	JACKSON	09
HANSON, KARL H	JACKSON	[illegible]
HANSON, PAULL R	ST. LOUIS METROP.	19

HANSS, ARMAND W	GREENE COUNTY	082
HANTMAN, STEPHEN L	ST. LOUIS METROP.	190
HANTZ, OSCAR	ST. LOUIS METROP.	190
HARDACRE, RUTH A	JACKSON	098
HARDIN, WM B	ST. LOUIS METROP.	190
HARDWICKE, HENRY M	BOONE	026
HARDY, DAVID A	ST. LOUIS METROP.	190
HARDY, DAVID C	ST. LOUIS METROP.	190
HARDY, GUERDAN	ST. LOUIS METROP.	190
HARDY, HENRY M	JACKSON	098
HARDY, JOHN W	JACKSON	098
HARDY, PATRICK J	ST. LOUIS METROP.	190
HARDY, STANTON L	MINERAL AREA	138
HARELL, ALEX	ST. LOUIS METROP.	190
HARFORD, CARL G	ST. LOUIS METROP.	190
HARKINS, WM B	ST. LOUIS METROP.	190
HARLESS, MORRIS S	JACKSON	098
HARLOW, LLOYD M	JACKSON	098
HARMON, BEN C	GREENE COUNTY	082
HARMS, JAMES F	WEST CENTRAL	214
HARNER, CASPER G	BUCHANAN	030
HARPER, FLEMING B	ST. LOUIS METROP.	190
HARR, PATRICK B	NORTHWEST	158
HARRELL, HENRY J	D-H-P-D	066
HARRIN, WM R	JACKSON	098
HARRIS, DAVID J	JACKSON	098
HARRIS, HUGH S	BOONE	026
HARRIS, LANNY W	JACKSON	098
HARRIS, ROBT J	BOONE	026
HARRIS, WELDON L	JACKSON	098
HARRISON, LEE B	ST. LOUIS METROP.	190
HARRISON, RICHARD L	ST. LOUIS METROP.	190
HARRISON, STRATTON W	GREENE COUNTY	082
HARRISON, WINSTON E	BOONE	026
HARRY, BRUCE E	BOONE	026
HART, L W	JACKSON	098
HART, WILLIAM	ST. LOUIS METROP.	190
HART, WILLIAM G	ST. LOUIS METROP.	190
HART, WM M	BOONE	026
HARTMAN, GREGORY L	JACKSON	098
HARTMAN, PAUL T	ST. LOUIS METROP.	190
HARTMANN, HELMUT	CAPE GIRARDEAU	042
HARTNETT, THOS D	ST. LOUIS METROP.	190
HARTSTEIN, JACK	ST. LOUIS METROP.	190
HARTWIG, FREDERICK H	JACKSON	098
HARTWIG, JOHN A	ST. LOUIS METROP.	190
HARTWIG, RAYMOND W	JACKSON	098
HARVEY, HAROLD D	GREENE COUNTY	082
HARVEY, THOMAS S	CLAY	050
HARWELL, JAMES L	ST. LOUIS METROP.	190
HARWELL, JAMES L	B-W-R-C	034
HASEK, JAMES A	SOUTH CENTRAL	206
HASEK, OLIVER M	SOUTH CENTRAL	206
HASENMUELLER, JAMES J	ST. LOUIS METROP.	190
HATA, DAIKICHI	COOPER	062
HATFALVI, 8ELA I	ST. LOUIS METROP.	190
HAUN, RONALD L	ST. LOUIS METROP.	190
HAUSER, ROBT J	COLE	058
HAUSHEER, HERMAN J	JACKSON	098
HAVALDAR, KANTI L	NORTHWEST	158
HAW, MARVIN T	BOONE	026
HAWATMEH, IBRAHIM S	ST. LOUIS METROP.	190
HAWK, BRAY O	ST. LOUIS METROP.	190
HAWKER, WM D	ST. LOUIS METROP.	190
HAWKINS, CALVIN D	GREENE COUNTY	082
HAWKINS, GEO L	ST. LOUIS METROP.	190
HAWKINS, JAMES C	BOONE	026
HAYDEN, MELVIN R	LAKE OF THE OZARKS	120
HAYEK, WESLEY E	ST. LOUIS METROP.	190
HAYES, JOHN W	PEMISCOT	170
HAYES, LAWRENCE L	CLAY	050
HAYES, PAUL W	BUCHANAN	030
HAYNES, JAMES W	ST. LOUIS METROP.	190
HAYNIE, WILLIAM W	WEST CENTRAL	214
HAYS, LARRY V	JACKSON	098
HAZAN, JOSEPH	ST. LOUIS METROP.	190
HAZEL, JAMES G	PEMISCOT	170
HAZEN, ROBT M	JACKSON	098
HAZUKA, DAVID F	JACKSON	098
HEADRICK, JOHN A	ST. LOUIS METROP.	190
HECKER, JOS E	B-W-R-C	034
HEDGES, RICHARD C	CLAY	050
HEEB, MAX A	SEMO	202
HEGDE, KORGI V	ST. LOUIS METROP.	190
HEILBRUNN, ILSE	MID-MISSOURI	182
HEILMAN, EDWARD J	JACKSON	098
HEIMBERG, MURRAY	BOONE	026
HEIMBURGER, ELIZABETH M	BOONE	026
HEIMBURGER, RICHARD A	BOONE	026
HEINS, JAMES N	ST. LOUIS METROP.	190
HEINZ, GEORGE	GREENE COUNTY	082
HELBING, EDWARD J	ST. LOUIS METROP.	190
HELFRICH, LORING	SEMO	202
HELLAM, DUANE C	GREENE COUNTY	082
HELLERSTEIN, STANLEY	JACKSON	098
HELLING, THOMAS S	JACKSON	098
HELLMAN, RICHARD	JACKSON	098
HELLMAN, ROBERT	ST. LOUIS METROP.	190
HELLWEG, CHAS E	OZARKS	166
HELLWEG, RAYMOND W	ST. LOUIS METROP.	190
HELMAN, RICHARD G	JACKSON	098
HEMAYA, RIZK M	JACKSON	098
HENDERSON, THOS W	SEMO	202
HENDIN, AARON	ST. LOUIS METROP.	190
HENDREN, THOS H	CLAY	050
HENRICKSON, W E	B-W-R-C	034
HENRY, CLARKE L	JACKSON	098
HENRY, JOS E	CLAY	050
HENRY, LAWRENCE D	BOONE	026
HENRY, ROBT D	WEST CENTRAL	214
HENSCHEL, EUGENE V	ST. LOUIS METROP.	190
HENSELMEIER, DALE M	ST. LOUIS METROP.	190
HENSTORF, HAROLD R	BOONE	026
HENZEL, JOHN H	BOONE	026
HER, KYU S	ST. LOUIS METROP.	190
HER8ERT, CHAS T	CAPE GIRARDEAU	042
HERDOIZA, ALFONSO W	JACKSON	098
HERFKENS, KENNETH D	GREENE COUNTY	082
HERJANIC, MARIJAN	ST. LOUIS METROP.	190
HERMAN, ALLEN I	BUCHANAN	030
HERMAN, EDWIN M	JACKSON	098
HERMAN, MORRIS	ST. LOUIS METROP.	190
HERMANN, CHARLES G	BUCHANAN	030
HERNANDEZ, SALVADOR R	ST. LOUIS METROP.	190
*HERRON, ROBERT T	ST. LOUIS METROP.	190
HERSHEY, FALLS B	ST. LOUIS METROP.	190
HERTEL, RONALD C	ST. LOUIS METROP.	190
HERVEY, WM H	JACKSON	098
HERYER, JOHN W	JACKSON	098
HERZOG, GODOFREDO M	ST. LOUIS METROP.	190
HESKER, ALBERT E	ST. LOUIS METROP.	190
HETLAGE, LOUIS P	ST. CHARLES-LINCOLN	126
HEUSLER, ANTON F	ST. LOUIS METROP.	190
HEUTEL, LEE B	ST. LOUIS METROP.	190
HIATT, BARRY A	ST. LOUIS METROP.	190
HIATT, H C	ST. LOUIS METROP.	190
HIBBARD, BLAINE Z	JACKSON	098
HICKCOX, JOHN P	BOONE	026
HICKERSON, WM H	JACKSON	098
HICKEY, GLENN M	ST. LOUIS METROP.	190
HICKEY, JAMES L	ST. LOUIS METROP.	190
HICKS, ROBT S	ST. LOUIS METROP.	190
HIGGINS, PHILIP C	ST. LOUIS METROP.	190
HIGGINS, RONALD A	JACKSON	098
HIGHTOWER, HARRY G	ST. LOUIS METROP.	190
HILBERT, PAUL H	ST. LOUIS METROP.	190
HILDRETH, HOWARD R	ST. LOUIS METROP.	190
HILL, JACK H	JACKSON	098
HILL, JAMES E	CALLAWAY	038
HILL, RONALD T	SEMO	202
HILL, XA C	ST. LOUIS METROP.	190
HILLMAN, RICHARD E	ST. LOUIS METROP.	190
HILLS, JOE E	GREENE COUNTY	082
HILTON, PAUL E	JASPER	102
HINDS, PAUL A	GREENE COUNTY	082
HINDS, ROY D	M-R-S	130
HINK, FREDERICK W	JACKSON	098
HIRONIMUS, JOHN E	ST. LOUIS METROP.	19D
HIRSCH, JOE E	JACKSON	09B
HIRSCH, JOHN D	ST. LOUIS METROP.	190
HITE, DENNIS E	LACLEDE	115
HO, GRINNY H	SEMO	202
HOADLEY, WM D	JACKSON	098
HOBBS, GEO H	JOHNSON	110

---

* Doctor of Osteopathy

HOBBS, JOHN E	ST. LOUIS METROP.	190
HOBSON, GERALD J	ST. LOUIS METROP.	190
HOCTOR, EMMETT F	MINERAL AREA	138
HODGE, ROBT H	CLAY	050
HODGSON, FRANK H	JACKSON	098
HOECH, GEO P	JACKSON	098
HOEHN, JOHN P	ST. LOUIS METROP.	190
HOELSCHER, HAROLD F	F-G-W	074
HOEPER, SAML D	JACKSON	098
HOEPER, SAMUEL D	JACKSON	098
HOFFMAN, JACOB S	JACKSON	098
HOFFMANN, ALAN L	JACKSON	098
HOFFMANN, AUGUSTIN D	ST. LOUIS METROP.	190
HOFFMANN, LEE M	JACKSON	098
HOFFMANN, RONALD E	ST. LOUIS METROP.	190
HOFLING, CHAS K	ST. LOUIS METROP.	190
HOFMEISTER, ROGER W	BOONE	026
HOFSTATTER, LEOPOLD	ST. LOUIS METROP.	190
HOGAN, CORNELIUS E	ST. LOUIS METROP.	190
HOGAN, JOHN R	ST. LOUIS METROP.	190
HOGAN, PATRICK A	ST. LOUIS METROP.	190
HOGAN, PATRICK C	ST. LOUIS METROP.	190
HOJA, WITOLD A	B-W-R-C	034
HOLBROOK, CHAS K	ST. LOUIS METROP.	190
HOLCOMB, JOHN K	CAPE GIRARDEAU	042
HOLDER, BARRETT K	ST. LOUIS METROP.	190
HOLDER, THOS M	JACKSON	098
HOLEKAMP, TIMOTHY	BOONE	026
HOLEMON, R E	ST. LOUIS METROP.	190
HOLLAND, ROBT D	GREENE COUNTY	082
HOLLEY, DONALD B	LAKE OF THE OZARKS	120
HOLLIDAY, CRAIG	ST. LOUIS METROP.	190
HOLLINGER, LLOYD A	JACKSON	098
HOLLINGSWORTH, RAY S	HENRY COUNTY	086
HOLLIS, RICHARD W	GREENE COUNTY	082
HOLLO, VENCEL W	ST. LOUIS METROP.	190
HOLLOCHER, RICHARD J	ST. LOUIS METROP.	190
HOLLWEG, KENNETH C	JACKSON	098
HOLMAN, JOS G	JACKSON	098
HOLMES, DANL E	GREENE COUNTY	082
HOLMES, DAVID R	GREENE COUNTY	082
HOLMES, RICHARD A	BOONE	026
HOLSCHER, EDWARD C	ST. LOUIS METROP.	190
HOLT, EARL P	ST. LOUIS METROP.	190
HOLT, WALDO S	JACKSON	098
HOLT, WILLIAM J	ST. LOUIS METROP.	190
HOLT, WM E	ST. LOUIS METROP.	190
HOLTMANN, BARBEL	ST. LOUIS METROP.	190
HOLTON, EDWARD B	JACKSON	098
HOLTZ, ALAN S	ST. LOUIS METROP.	190
HOLTZ, SUMNER	ST. LOUIS METROP.	190
HOLTZMAN, SAML	JASPER	102
HONAAS, TRYGVE O	CAPE GIRARDEAU	042
HOOK, WALLER G	JACKSON	098
HOOKERMAN, BRUCE J	ST. LOUIS METROP.	190
HOOVER, BERNARD L	ST. LOUIS METROP.	190
HOPKINS, JAMES P	JACKSON	098
HOPKINS, THOMAS S	PETTIS	178
HOPKINS, THOS J	PETTIS	178
HORENSTEIN, SIMON	ST. LOUIS METROP.	190
HORI, JOSE M	C-M-M-R	046
HORN, PAUL C	CAPE GIRARDEAU	042
HORNER, JOHN L	ST. LOUIS METROP.	190
HORNSTRA, ROBIJN K	JACKSON	098
HOROCHOWSKY, ALEJANDRO	PETTIS	178
HORRILLENO, EMILIO G	ST. LOUIS METROP.	190
HORTON, JAMES D	GREENE COUNTY	082
HORWITZ, IRWIN B	ST. LOUIS METROP.	190
HOUTTUIN, ERIK	ST. LOUIS METROP.	190
HOWDEN, THOS L	BUCHANAN	030
HOWE, ALBERT L	ST. LOUIS METROP.	190
HOWE, LOUIS F	ST. LOUIS METROP.	190
HOWELL, BILLY D	GRAND RIVER	078
HOWITT, HARVEY F	BOONE	026
HOXWORTH, GERALO M	AUDRAIN	014
HOYE, ROBERT C	PERRY-STE. GENEVIEVE	174
HOYT, TERRY S	BOONE	026
HRNICEK, GARY E	GREENE COUNTY	082
HSU, CHING F	ST. LOUIS METROP.	190
HUANG, CHING B	JACKSON	098
HUANG, JUN S	DUNKLIN	070
HUANG, SHI H	ST. LOUIS METROP.	190
HUBBARD, SALLY L	GREENE COUNTY	082
HUBBELL, IRA G	BOONE	026
HUBER, LASLEY E	C-M-M-R	046
HUCK, FRANK F	ST. LOUIS METROP.	190
HUCK, RICHARD F	ST. LOUIS METROP.	190
HUCKSTEP, ROBT A	MINERAL AREA	138
HUDGENS, RICHARD W	ST. LOUIS METROP.	190
HUDSON, GIP R	C-M-M-R	046
HUEWE, DOUGLAS A	GREENE COUNTY	082
HUFFAKER, WILLIAM H	ST. LOUIS METROP.	190
HUFFT, ROBERT E	GREENE COUNTY	082
HUGGINS, ALBERT M	ST. LOUIS METROP.	190
HUGHES, CHAS P	ST. LOUIS METROP.	190
HUGHES, DEREK	COLE	058
HUGHES, JUOSON M	BUCHANAN	030
HUGHES, MICHAEL F	JACKSON	098
HUGHES, ROBERT E	JACKSON	098
HUGHES, ROBT G	ST. LOUIS METROP.	190
HUGHES, SHELBY B	HENRY COUNTY	086
HULBERT, BERNARD	ST. LOUIS METROP.	190
HULSTRA, JOHANNES F	GREENE COUNTY	082
HUMMEL, ANTON J	ST. LOUIS METROP.	190
HUMMEL, WM C	ST. LOUIS METROP.	190
HUMPHREY, JAMES D	NORTHWEST	158
HUMPHREYS, EDWARD T	COOPER	062
HUNGATE, CARROLL P	JACKSON	098
HUNKELER, JOHN D	JACKSON	098
HUNLETH, FRANK E	ST. LOUIS METROP.	190
HUNT, JOHN L	8-W-R-C	03
HUNT, ROBERT S	CAPE GIRARDEAU	04
HUNT, THOS R	JACKSON	09
HUNTINGTON, IONE	OZARKS	16
HUNZICKER, WARREN J	JACKSON	09
HUQ, MD N	AUDRAIN	01
HURLEY, JOSEPH J	ST. LOUIS METROP.	19
HURST, DANIEL J	BOONE	02
HURST, WILFRED W	JASPER	10
HUSAIN, SYED A	BOONE	02
HUSE, WM J	JACKSON	09
HUSEMAN, RICHARD	JACKSON	09
HUSTED, FREDERICK C	GREENE COUNTY	08
HUSTON, KENT A	JACKSON	09
HUTCHINSON, JAMES H	ST. LOUIS METROP.	19
HUTCHINSON, WILLIAM	ST. LOUIS METROP.	19
HUTSON, BRUCE P	JACKSON	09
HWANG, YUNG H	JASPER	10
HYATT, ROBT W	BOONE	02
HYDE, LAWRENCE L	JACKSON	09
HYMAN, ANNA	ST. LOUIS METROP.	19

I

I8ARRA, GUILLERMO	JACKSON	09
IDE, CARL H	BOONE	02
IDE, LUCIEN W	BUCHANAN	03
IKEDA, SHIGEMASA	ST. LOUIS METROP.	19
IMES, ELVIN D	NORTHWEST	15
INGHAM, WALTON C	JACKSON	09
INMAN, MAX M	ST. LOUIS METROP.	19
INOCENCIO, EDDIE C	BUCHANAN	03
IPPENSEN, JOHN H	GREENE COUNTY	08
IRICK, MAX L	ST. CHARLES-LINCOLN	12
IRVIN, WILLIAM S	BOONE	02
IRVIN, WM M	ST. LOUIS METROP.	19
IRVINE, JOHN W	JACKSON	09
IRWIG, FRED	JACKSON	09
ISAAC, ANITA M	GREENE COUNTY	08
ISE, FRANK H	CLAY	05
ISHIDA, YASUO	ST. LOUIS METROP.	19
ISHIZAWAR, YORCKAY C	ST. LOUIS METROP.	19
ISLAM, MD N	ST. LOUIS METROP.	19
ISSERMAN, MICHAEL J	ST. LOUIS METROP.	19
ITTNER, GEO W	ST. LOUIS METROP.	19
IVY, HENRY B	GREENE COUNTY	08
IWANE, AKIRA	ST. LOUIS METROP.	19
IZMIRLIAN, GRANT	ST. LOUIS METROP.	19

J

JABLONSKI, RAYMOND C	ST. LOUIS METROP.	19
JACKMAN, ROGER L	B-W-R-C	03
JACKSON, EDWARD K	PIKE	18
JACKSON, HAYWOOO R	JACKSON	09
JACKSON, ROBT L	BOONE	02
JACKSON, VERNON B	CALLAWAY	03
JACOB, KARL A	ST. LOUIS METROP.	19
JACOBS, CHAS C	ST. LOUIS METROP.	19

JACOBS, FREDERICK A	ST. LOUIS METROP.	190
JACOBS, JOHN R	ST. LOUIS METROP.	190
JACOBS, MORTON	JACKSON	098
JACOBS, WALTER H	JACKSON	098
JAEGER, JOS N	CAPE GIRARDEAU	042
JAFFE, BERNARD M	ST. LOUIS METROP.	190
JAIN, SAVITRI G	ST. LOUIS METROP.	190
JAIN, SUMER C	ST. LOUIS METROP.	190
JAMES, ELIZABETH J	BOONE	026
JAMES, OTIS E	JACKSON	098
JAMES, RONALD C	BOONE	026
JAMESON, JAMES E	GREENE COUNTY	082
JANECZKO, GREGORY F	GREENE COUNTY	082
JANNEY, JAMES G	ST. LOUIS METROP.	190
JAROSEWYCZ, DEMETRIUS	ST. LOUIS METROP.	190
JARVIS, CATHY C	ST. LOUIS METROP.	190
JATALA, IJAZ A	ST. LOUIS METROP.	190
JAUDON, JOS C	ST. LOUIS METROP.	190
JAYANANDAIAH, HIREMATHADA	M-R-S	130
JAZBI, BASHARAT U	JACKSON	098
JEAN, J T	ST. LOUIS METROP.	190
JEANS, VIRGIL E	JASPER	102
JEDD, JAMES J	ST. LOUIS METROP.	190
JELLEY, V C	JACKSON	098
JENAB, MORTEZA	JACKSON	098
JENKINS, DAVID C	JACKSON	098
JENKINS, JAMES J	ST. LOUIS METROP.	190
JENNETT, J H	JACKSON	098
JENNY, ARTHUR B	ST. LOUIS METROP.	190
JENSEN, JOSHUA E	ST. LOUIS METROP.	190
JENSEN, JOSHUA E	ST. LOUIS METROP.	190
JICK, SIDNEY	ST. LOUIS METROP.	190
JIMENEZ, JOSE	BUCHANAN	030
JOBE, CHAS L	GREENE COUNTY	082
JOFFE, WM S	ST. LOUIS METROP.	190
JOFTUS, MORRIS	ST. LOUIS METROP.	190
JOHNSON, C L	JACKSON	098
JOHNSON, CHAS J	ST. LOUIS METROP.	190
JOHNSON, CHAS S	JOHNSON	110
JOHNSON, DALLAS A	JACKSON	098
JOHNSON, E D	CAPE GIRARDEAU	042
JOHNSON, EARL W	CAPE GIRARDEAU	042
JOHNSON, EDGAR W	JACKSON	098
JOHNSON, FRITZ M	GREENE COUNTY	082
JOHNSON, GARETH R	JACKSON	098
JOHNSON, GEO A	GREENE COUNTY	082
JOHNSON, GEO L	GREENE COUNTY	082
JOHNSON, JAMES S	JACKSON	098
JOHNSON, JOHNNY E	ST. LOUIS METROP.	190
JOHNSON, JOS C	GREENE COUNTY	082
JOHNSON, JOS E	JACKSON	098
JOHNSON, MARK F	ST. LOUIS METROP.	190
JOHNSON, MITCHELL D	ST. LOUIS METROP.	190
JOHNSON, NELSON E	JACKSON	098
JOHNSON, RICHARD E	BOONE	026
JOHNSON, RICHARD L	JACKSON	098
JOHNSON, ROY	ST. LOUIS METROP.	190
JOHNSON, THOMAS W	JACKSON	098
JOHNSON, THOS M	JACKSON	098
JOHNSON, TOM A	ST. LOUIS METROP.	190
JOHNSON, W B	GREENE COUNTY	082
JOHNSON, WARFORD B	GREENE COUNTY	082
JOHNSON, WARREN L	JACKSON	098
JOHNSON, WM F	GREENE COUNTY	082
JOHNSTON, GLEN P	ST. LOUIS METROP.	190
JOHNSTON, JOS L	GREENE COUNTY	082
JOHNSTON, WM D	BOONE	026
JOHNSTONE, JOHN T	ST. LOUIS METROP.	190
JOLLY, BENJ N	AUDRAIN	014
JOLLY, WM H	AUDRAIN	014
JONAS, HARRY S	JACKSON	098
JONES, ANDREW B	ST. LOUIS METROP.	190
JONES, ARTHUR C	ST. LOUIS METROP.	190
JONES, DAVID N	CAPE GIRARDEAU	042
JONES, DOROTHY J	ST. LOUIS METROP.	190
JONES, EDNA M	HENRY COUNTY	086
JONES, EDWARD S	WEST CENTRAL	214
JONES, GALE O	JACKSON	098
JONES, GREY	ST. LOUIS METROP.	190
JONES, HAROLD L	GREENE COUNTY	082
JONES, JAMES D	ST. LOUIS METROP.	190
JONES, JAMES H	ST. LOUIS METROP.	190
JONES, KEITH D	JOHNSON	110
JONES, MARION E	JACKSON	098
JONES, OTEY S	ST. LOUIS METROP.	190
JONES, RICHARD A	ST. LOUIS METROP.	190
JONES, ROBERT R	WEST CENTRAL	214
JONES, ROBERT S	BOONE	026
JONES, SAML T	JACKSON	098
JONES, SARA T	ST. LOUIS METROP.	190
JONES, T R	JACKSON	098
JONES, VICTOR T	ST. LOUIS METROP.	190
JORDAN, WALTER R	ST. LOUIS METROP.	190
JOSEPH, DONALD J	BOONE	026
JOSEPH, HAROLD J	ST. LOUIS METROP.	190
JOSLYN, HAROLD L	ST. LOUIS METROP.	190
JOST, CHAS A	ST. LOUIS METROP.	190
JOTTE, RICHARD F	ST. LOUIS METROP.	190
JOYCE, STEVEN T	JACKSON	098
JUDD, DONALD R	ST. LOUIS METROP.	190
JUDGE, WALTER T	JEFFERSON	106
JUDY, JOS D	ST. LOUIS METROP.	190
JUERGENS, WM G	ST. LOUIS METROP.	190
JULIEN, RENE	ST. LOUIS METROP.	190
JUNG, CHRISTOPHER H	CAPE GIRARDEAU	042
JUNG, J M	CAPE GIRARDEAU	042
JUSTUS, JOHN B	JACKSON	098

K

KABIR, MOHAMMED A	ST. LOUIS METROP.	190
KAHLER, MONTE R	D-H-P-D	066
KAHN, LAWRENCE I	ST. LOUIS METROP.	190
KAHN, MARVIN	JACKSON	098
KAIRUZ, BARTOLOME C	ST. LOUIS METROP.	190
KAISER, GEO C	ST. LOUIS METROP.	190
KALLENBACH, GLEN P	AUDRAIN	014
KAMADA, TSUTOMU	ST. CHARLES-LINCOLN	126
KAMAKAS, NICHOLAS C	ST. LOUIS METROP.	190
KAMATH, K P S	CAPE GIRARDEAU	042
KAMENETZKY, STEPHEN A	ST. LOUIS METROP.	190
KAMINSKI, DONALD L	ST. LOUIS METROP.	190
KAMINSKY, WATSON W	ST. LOUIS METROP.	190
KANAGAWA, HAROLD K	COLE	058
KANAREK, JOSEPH	JACKSON	098
*KANDALAFT, FUAD H	SEMO	202
KANDT, RAYMOND E	JACKSON	098
KANE, CLYDE E	ST. LOUIS METROP.	190
KANG, JUAN	ST. LOUIS METROP.	190
KANG, YOUNG M	SOUTH CENTRAL	206
KANNEGIESSER, HARTMUT	ST. LOUIS METROP.	190
KANTOR, JULIUS M	JACKSON	098
KANTOR, OWEN	ST. LOUIS METROP.	190
KANTOR, SAML	JACKSON	098
KAO, MING-SHIAN	ST. LOUIS METROP.	190
KAPLAN, ALEX H	ST. LOUIS METROP.	190
KAPLAN, MICHAEL F	BOONE	026
KAPPESSER, NETAJEAN G	ST. LOUIS METROP.	190
KAPPESSER, ROLAND C	ST. LOUIS METROP.	190
KARANDJEFF, APOSTLE D	ST. LOUIS METROP.	190
KARDESCH, MILTON	ST. LOUIS METROP.	190
KARDINAL, CARL G	BOONE	026
KARL, MICHAEL M	ST. LOUIS METROP.	190
KARRAKER, ALVAN G	MINERAL AREA	138
KARSH, ROBT S	ST. LOUIS METROP.	190
KARTUS, IRVING	JACKSON	098
KASKIE, CLIFFORD R	ST. LOUIS METROP.	190
KASS, MICHAEL A	ST. LOUIS METROP.	190
KASTEN, MELVIN C	CAPE GIRARDEAU	042
KATF, NICOLA Y	CLAY	050
KATSANTONIS, GEORGE	ST. LOUIS METROP.	190
KAUFFMAN, RUTH	LAKE OF THE OZARKS	120
KAUFMAN, ANDREW B	JACKSON	098
KAUFMAN, ROBT L	ST. LOUIS METROP.	190
KAUFMANN, HERBERT H	JACKSON	098
KAUL, PHILIP G	JACKSON	098
KAUP, CHANDRA S	ST. LOUIS METROP.	190
KAY, BILLY F	JACKSON	098
KAYANAN, JOSE C	JACKSON	098
KAYES, JACK	ST. LOUIS METROP.	190
KAYS, KENNETH M	BOONE	026
KAZA, RAMARAO	ST. LOUIS METROP.	190
KEAIRNES, HAROLD W	JACKSON	098
KEATING, JAMES P	ST. LOUIS METROP.	190
KEEFE, DAVID M	ST. CHARLES-LINCOLN	126
KEELER, JAMES E	JACKSON	098

---

* Doctor of Osteopathy

KEFFLER, KARL L	ST. LOUIS METROP.	190
KEIM, J H	CAPE GIRARDEAU	042
KEITGES, PIERRE W	JACKSON	098
KEITHLY, DENNIS J	BOONE	026
KELL, GARY A	GREENE COUNTY	082
KELLER, DAVID W	ST. LOUIS METROP.	190
KELLER, LOUIS	ST. LOUIS METROP.	190
KELLER, MAURICE J	ST. LOUIS METROP.	190
KELLER, ROBT M	ST. CHARLES-LINCOLN	126
KELLETT, JOHN G	ST. LOUIS METROP.	190
KELLEY, GILBERT B	ANDREW	D10
KELLING, DOUGLAS G	JACKSON	098
KELLING, JORDAN A	LAFAYETTE-RAY	118
KELLY, CHARLES R	JACKSON	098
KELLY, JAMES C	GREENE COUNTY	082
KELLY, JOHN J	ST. LOUIS METROP.	190
KELLY, JOSEPH G	CLAY	050
KELLY, R E	ST. LOUIS METROP.	190
KELLY, WILLIAM A	ST. LOUIS METROP.	190
KELTNER, RAYMOND M	ST. LOUIS METROP.	190
KELTNER, RAYMOND O	JACKSON	098
KENDALL, CHAS A	JACKSON	098
KENDALL, FORREST H	JACKSON	098
KENDALL, MALCOLM E	JACKSON	098
KENDIG, JOHN H	ST. LOUIS METROP.	190
KENDIS, JOS B	ST. LOUIS METROP.	190
KENNARD, G K	JACKSON	098
KENNEDY, EILEEN D	JACKSON	098
KENNEDY, FRED R	JACKSON	098
KENNEDY, TIMOTHY D	JACKSON	098
KENNEY, JOHN D	JACKSON	098
KENNEY, JOHN D	ST. LOUIS METROP.	190
KENNEY, ROY E	OZARKS	166
KENNINGTON, L J	ST. LOUIS METROP.	190
KENT, BELA K	JACKSON	098
KEOHANE, MARK	ST. CHARLES-LINCOLN	126
KEOWN, KENNETH K	BOONE	026
KEPES, MAGDA	JACKSON	098
KERNODLE, JEFFERSON D	JACKSON	098
KERR, FRANK T	OZARKS	166
KERR, HAROLD H	JACKSON	098
KESSEL, JAMES W	ST. LOUIS METROP.	190
KESSLER, SHELDON	ST. LOUIS METROP.	190
KETTERMAN, GRACE H	JACKSON	098
KETTERMAN, HERBERT L	JACKSON	098
KETTNER, EDWARD G	JACKSON	098
KEY, JAMES S	GREENE COUNTY	082
KEYES, E L	ST. LOUIS METROP.	190
KHALIL, TAMER G	GREENE COUNTY	082
KHAN, ABDUL G	ST. LOUIS METROP.	190
KHAN, ABDUL R	ST. LOUIS METROP.	190
KHAN, ALTAF A	ST. LOUIS METROP.	190
KHAN, M O	NORTHWEST	158
KHAN, MOHAMMED V.H.	MID-MISSOURI	182
KHARE, NARENDRA K	JACKSON	098
KHODADOUST, KAVOUS	ST. LOUIS METROP.	190
KHOLEIF, ALI	ST. LOUIS METROP.	190
KHOURY, CECILE S	JACKSON	098
KIEKHAEFER, THEODORE C N	BUCHANAN	030
KIENE, RICHARD H	JACKSON	098
KIENZLE, EDWARD	ST. LOUIS METROP.	190
KILKER, CLARENCE H	ST. LOUIS METROP.	190
KILKER, DONALD E	ST. LOUIS METROP.	190
KILLEBREW, DAVID S	ST. LOUIS METROP.	190
KILLEN, DUNCAN A	JACKSON	098
KILO, CHAS	ST. LOUIS METROP.	190
KIM, CHUL	B-W-R-C	034
KIM, CHUNG K	ST. LOUIS METROP.	190
KIM, LONGIUS H	MINERAL AREA	138
KIM, STANLEY W	ST. LOUIS METROP.	190
KIM, WON M	ST. LOUIS METROP.	190
KIM, YANG H	F-G-W	074
KIMBALL, IRELAND W	PLATTE	188
KIMBALL, MERRITT H	JACKSON	098
KIMBLE, HARVEY S	JACKSON	098
KIMELMAN, NATHAN	ST. LOUIS METROP.	190
KINDER, DOYLE O	GREENE COUNTY	082
KINDER, JAMES A	CAPE GIRARDEAU	042
KINDER, JERRY L	CAPE GIRARDEAU	042
KINDRED, LYNN H	JACKSON	098
KING, ELBERT R	WEST CENTRAL	214
KING, EUSTACE E	ST. LOUIS METROP.	190
KING, FRANCIS C	ST. LOUIS METROP.	190
KING, JAMES C	OZARKS	166
KING, JAMES P	ST. LOUIS METROP.	190
KING, JAY T	JACKSON	098
KING, JOHN V	ST. LOUIS METROP.	190
KING, JOHN V	ST. LOUIS METROP.	190
KING, MORRIS K	ST. LOUIS METROP.	190
KING, PHILLIP E	CLAY	050
KING, RICHARD H	HENRY COUNTY	086
KING, ROBERT J	BOONE	026
KINGSBURY, HELEN	JACKSON	098
KINGSBURY, ROBT J	ST. CHARLES-LINCOLN	126
KINGSLAND, ROBERT C	ST. LOUIS METROP.	190
KINSELLA, EDWARD D	ST. LOUIS METROP.	190
KINSELLA, PETER W	ST. LOUIS METROP.	190
KINSELLA, RALPH A	ST. LOUIS METROP.	190
KIPFER, ROBT E	GREENE COUNTY	082
KIPNIS, DAVID M	ST. LOUIS METROP.	190
KIRCHMER, JOHN T	JACKSON	098
KIRKLAND, JERRY A	CLAY	050
KIRKMAN, ROBERT E	JASPER	102
KIRUBAKARAN, VELLORE R	BUCHANAN	030
KISSANE, JOHN M	ST. LOUIS METROP.	190
KISSELL, RICHARD W	GREENE COUNTY	082
KISTER, GEO E	ST. CHARLES-LINCOLN	126
KISTLER, WALTER D	ST. LOUIS METROP.	190
KISTNER, WM F	ST. LOUIS METROP.	190
KITCHEN, WM M	JACKSON	098
KLACHKO, DAVID M	BOONE	
KLEBBA, LARRY B	COLE	
KLEIN, ADELBERT H	ST. LOUIS METROP.	
KLEIN, ARNOLD G	ST. LOUIS METROP.	
KLEIN, EDWARD H	JACKSON	
KLEIN, SAUL J	ST. LOUIS METROP.	
KLENK, CHAS L	ST. LOUIS METROP.	
KLINE, CARLYN M	BUCHANAN	
KLINE, EDMUND W	BUCHANAN	
KLINGNER, GEO M	GREENE COUNTY	
KLINGNER, GEO M	GREENE COUNTY	
KLINKERFUSS, GEO H	GREENE COUNTY	
KLIPPEL, BERNHARDT W	ST. LOUIS METROP.	
KLOECKER, RICHARD J	ST. LOUIS METROP.	
KLOECKER, ROBT P	ST. LOUIS METROP.	
KLUZAK, THOMAS R	ST. LOUIS METROP.	
KNABB, HENRY F	GREENE COUNTY	
KNABB, KENNETH E	GREENE COUNTY	
KNEAL, ELLSWORTH	ST. LOUIS METROP.	
KNEIBERT, FRED L	B-W-R-C	
KNEPPER, PAUL A	BUCHANAN	
KNIGHT, FRANKLIN P	ST. LOUIS METROP.	
KNIGHT, LYLE B	JACKSON	
KNIGHT, WM A	ST. LOUIS METROP.	
KNIPSCHILD, BEDFORD F	SALINE	
KNOCH, H K	JACKSON	
KNOCK, HENRY L	ST. LOUIS METROP.	
KNOPF, HARRY L	ST. LOUIS METROP.	
KNOWLES, ROBT R	ST. LOUIS METROP.	
KNOWLTON, NORMAN P	ST. LOUIS METROP.	
KNOWLTON, NORMAN P	GREENE COUNTY	
KOBBERMANN, KOBBY J	GREENE COUNTY	
KODNER, IRA J	ST. LOUIS METROP.	
KOEHLER, GEO A	ST. LOUIS METROP.	
KOEHLER, JOHN W	JASPER	
KOEHLER, ROBERT E	ST. LOUIS METROP.	
KOENIG, MARVIN I	ST. LOUIS METROP.	
KOERNER, KENNETH A	ST. LOUIS METROP.	
KOHLER, LOUIS H	ST. LOUIS METROP.	
KOLDYS, KENNETH W	CAPE GIRARDEAU	
KOLKER, ALLAN E	ST. LOUIS METROP.	
KOLODNER, ROBERT	ST. LOUIS METROP.	
KOLODNY, ROBT C	ST. LOUIS METROP.	
KOLZE, VERNON W	GREENE COUNTY	
KONZELMAN, JOHN A	ST. LOUIS METROP.	
KOON, BENNY H	JACKSON	
KOONTZ, PAUL G	JACKSON	
KOPMAN, ERCUMENT A	ST. LOUIS METROP.	
KOPP, LEONARD J	ST. LOUIS METROP.	
KOPPERMAN, MORDECAI	JACKSON	
KOPPERS, LAWRENCE E	JACKSON	
KORENBLAT, PHILLIP E	ST. LOUIS METROP.	
KORN, ROBT L	ST. LOUIS METROP.	
KORTH, WM M	JACKSON	
KOSURI, LALITHA	JACKSON	

KOTNER, LAWRENCE M	ST. LOUIS METROP.	190
KOURY, WILLIAM C	JACKSON	098
KOVAC, S R	ST. LOUIS METROP.	190
KOWERT, EDWARD H	ST. LOUIS METROP.	190
KRAEGER, RUSSELL R	ST. LOUIS METROP.	190
KRAETSCH, ROBERT E	ST. LOUIS METROP.	190
KRAFT, JACOB	JACKSON	098
KRAHN, HENRY C	GREENE COUNTY	082
KRAIN, SAMUEL	ST. LOUIS METROP.	190
KRANER, JUSTIN F	ST. LOUIS METROP.	190
KRANSON, SEYMOUR J	JACKSON	098
KRATZ, PAUL E	CAPE GIRARDEAU	042
KRAUS, FREDERICK T	ST. LOUIS METROP.	190
KRAUSE, GEO L	ST. LOUIS METROP.	190
KRAUTMANN, JOHN J	COLE	058
KRETCHMAR, ALAN P	ST. LOUIS METROP.	190
KREWET, FRANK A	ST. LOUIS METROP.	190
KROEGER, GEO B	ST. LOUIS METROP.	190
KROJANKER, ROLF J	ST. LOUIS METROP.	190
KROMER, CHAS J	ST. LOUIS METROP.	190
KRONEMER, NORTON S	ST. LOUIS METROP.	190
KRUPIN, BARBARA A	ST. LOUIS METROP.	190
KRUPIN, THEODORE	ST. LOUIS METROP.	190
KRUSE, CARL R	M-R-S	130
KUANGPARICHAT, MANOCH	LAFAYETTE-RAY	118
KUBIN, MILFORD T	BOONE	026
KUCZER, ARNOLDO	ST. LOUIS METROP.	190
KUEBRICH, THOS C	ST. LOUIS METROP.	190
KUENZI, DONALD E	CLAY	050
KUHLMAN, RALPH F	ST. LOUIS METROP.	190
KUHLMAN, ROBERT E	ST. LOUIS METROP.	190
KUHN, JOHN R	JASPER	102
KUHN, NOBUKO O	ST. LOUIS METROP.	190
KUHN, WM F	JACKSON	098
KULAK, GARY	ST. LOUIS METROP.	190
KULKAMTHORN, SIRIPORN	ST. LOUIS METROP.	190
KULKAMTHORN, SRIPATT	ST. LOUIS METROP.	190
KULOWSKI, JACOB	BUCHANAN	030
KUNTZE, RANDALL P	DUNKLIN	070
KUNZ, HAROLD G	ST. LOUIS METROP.	190
KUNZ, STEPHEN R	JACKSON	098
KUO, GONG T	SEMO	202
KURTZ, KARL J	JACKSON	098
KURUVILLA, GEORGE	NORTHWEST	158
KUTRYB, WALTER J	ST. LOUIS METROP.	190
KUTTNER, MARIANNE	ST. LOUIS METROP.	190
KWAN, VICENTE W	ST. LOUIS METROP.	190
KWON, YONGSOO	M-R-S	130
KWOUN, SOUNG	B-W-R-C	034
KYAW, MYO M	ST. LOUIS METROP.	190
KYGER, JOHN E	JACKSON	098

L

L'ECUYER, JEROME L	ST. LOUIS METROP.	190
LA ORIERE, RAYMOND J	ST. LOUIS METROP.	190
LA FERRIERE, KEITH	ST. LOUIS METROP.	190
LA HUE, WILLIAM C	LAFAYETTE-RAY	118
LAATSCH, ROBT H	B-W-R-C	034
LABABIOI, ZUHOI A	BOONE	026
LABACH, JAMES P	ST. LOUIS METROP.	190
LACHANCE, J A	BOONE	026
LACY, PAUL E	ST. LOUIS METROP.	190
LADO, CHAS B	ST. LOUIS METROP.	190
LAOENSON, ROLAND P	BOONE	026
LADYMAN, GEO H	B-W-R-C	034
LAFFOON, ROBERT G	PETTIS	178
LAI, GUANG-JENG	PERRY-STE. GENEVIEVE	174
LAI, HSIEN-ELL	LAFAYETTE-RAY	118
LAIRD, JOHN M	ST. LOUIS METROP.	190
LALLY, JAMES J	JACKSON	098
LAM, ERNESTO S	ST. LOUIS METROP.	190
LAMAR, ROBT F	JACKSON	098
LAMB, WANDA	ST. LOUIS METROP.	190
LAMBERT, LAURA M	JACKSON	098
LAMBERTI, JOS W	BOONE	026
LAMBIE, RODGER W	JACKSON	098
LAMBRIGHT, ROBERT L	JACKSON	098
LAMPROS, WM P	ST. LOUIS METROP.	190
LAMPTON, LAWRENCE M	BOONE	026
LAMY, JOHN E	PETTIS	178
LANDAU, WM M	ST. LOUIS METROP.	190
LANOER, ROBERT C	ST. LOUIS METROP.	190
LANDERS, BURNELL	JACKSON	098
*LANDERS, GARY A	CLAY	050
LANOHUIS, LEO R	BOONE	026
LANDIS, GEO K	JACKSON	098
LANDRY, J H	ST. LOUIS METROP.	190
LANDSBAUM, CHARLES J	COLE	058
LANOY, RICHARD	ST. LOUIS METROP.	190
LANE, CLINTON W	ST. LOUIS METROP.	190
LANE, DANL K	ST. LOUIS METROP.	190
LANG, JOHN J	ST. LOUIS METROP.	190
LANGAN, JAMES G	ST. LOUIS METROP.	190
LANGE, ADOLPH C	ST. LOUIS METROP.	190
LANGENBACH, ALFRED M	ST. LOUIS METROP.	190
LANGEVIN, JACK A	SOUTH CENTRAL	206
LANGSTON, WALTER R	GREENE COUNTY	082
LANIER, EARL W	ST. LOUIS METROP.	190
LANKFORD, HAROLD D	AUDRAIN	014
LANNING, R J	CLAY	050
LANSANGAN, ISAIAS P	ST. LOUIS METROP.	190
LANSCHE, W E	ST. LOUIS METROP.	190
LAPI, ANGELO	JACKSON	098
LAPP, HARRY C	JACKSON	098
LAROCCA, FELIX F	ST. LOUIS METROP.	190
LARSEN, VIRGINIA L	ST. LOUIS METROP.	190
LARSEN, WM E	JACKSON	098
LARSON, PAUL U	ST. LOUIS METROP.	190
LASETER, MICHAEL	B-W-R-C	034
LATHAM, KENYON S	MONITEAU	142
LATHAM, RAYMOND W	JACKSON	098
LATIMER, WALTER N	CLAY	050
LATTINVILLE, HENRY E	ST. LOUIS METROP.	190
LAU, LUIS	ST. LOUIS METROP.	190
LAUBER, JOS J	ST. LOUIS METROP.	190
LAUER, DANL J	JACKSON	098
LAUER, JOHN O	ST. LOUIS METROP.	190
LAUTER, STEVEN	ST. LOUIS METROP.	190
LAUX, FRANCE A	ST. LOUIS METROP.	190
LAWRENCE, GEO H	ST. LOUIS METROP.	190
LAWRENCE, JOHN R	SALINE	198
LAWTON, JOHN T	ST. LOUIS METROP.	190
LAYCOB, LELAND M	ST. LOUIS METROP.	190
LAYLE, JOHN K	JACKSON	098
LAYTON, IRA C	JACKSON	098
LE BLANC, LEO J	ST. LOUIS METROP.	190
LE FEVRE, PHILIP J	GREENE COUNTY	082
LEACH, WILFRED	ST. LOUIS METROP.	190
LEARY, DANL J	ST. LOUIS METROP.	190
LEDERER, CHAS M	JOHNSON	110
LEE, CARLETON H	BUCHANAN	030
LEE, DUK S	ST. LOUIS METROP.	190
LEE, DWIGHT A	ST. LOUIS METROP.	190
LEE, FRANSISKA A	ST. LOUIS METROP.	190
LEE, GERALD B	JACKSON	098
LEE, HENRY A	JACKSON	098
LEE, IN K	F-G-W	074
LEE, JOSEPH KING T	ST. LOUIS METROP.	190
LEE, JOSEPH KING TAK	ST. LOUIS METROP.	190
LEE, JUNG H	JEFFERSON	106
LEE, KIL S	ST. LOUIS METROP.	190
LEE, KING Y	JACKSON	098
LEE, LAWRENCE E	JACKSON	098
LEE, SOOK-LA	C-M-M-R	046
LEE, TAE H	JACKSON	098
LEE, YEW SOONG	ST. LOUIS METROP.	190
LEECH, CHAS A	BOONE	026
LEECH, MAURICE P	HOWARD	094
LEEPER, CLAUDE K	BOONE	026
LEEPER, SIDLEE W	BOONE	026
LEES, JOYCE M	JACKSON	098
LEGAN, JOHN K	DUNKLIN	070
LEHMAN, PHILIP C	BUCHANAN	030
LEHNER, RICHARD L	JACKSON	098
LEIBSOHN, JOEL M	JACKSON	098
LEIDINGER, KARL J	GREENE COUNTY	082
LEIFER, WM W	JACKSON	098
LEIGHTNER, WM F	ST. LOUIS METROP.	190
LEMING, BERT H	ST. LOUIS METROP.	190
LEMMON, GEO B	GREENE COUNTY	082
LENOBEL, MILTON I	ST. LOUIS METROP.	190
LENOBEL, ROBERT S	ST. LOUIS METROP.	190
LENTZ, CLARK H	JACKSON	098
LENTZ, HAROLD C	JACKSON	098
LENTZ, HAROLD C	OZARKS	166

---

* Doctor of Osteopathy

LEONE, CHERYL	ST. LOUIS METROP.	190
LEONE, PHILIP G	ST. LOUIS METROP.	190
LEONHARDT, ERWIN M	ST. LOUIS METROP.	190
LEPLEY, CHARLES	ST. LOUIS METROP.	190
LERNER, BRUCE	JACKSON	098
LERNER, SCOTT A	CLAY	050
LEROUX, GENE H	B-W-R-C	034
LERWICK, EVERETT R	ST. LOUIS METROP.	190
LESLIE, CHAS H	ST. LOUIS METROP.	190
LESLIE, JAMES T	COLE	058
LESLIE, STEPHEN A	CLAY	050
LESTER, JOHN B	JACKSON	098
LESTMANN, HENRY E	B-W-R-C	034
LEVEY, HARRY B	JACKSON	098
LEVIN, MARVIN E	ST. LOUIS METROP.	190
LEVINE, LAURENCE A	ST. LOUIS METROP.	190
LEVITT, JOS	ST. LOUIS METROP.	190
LEVITT, ROBT G	ST. LOUIS METROP.	190
LEVY, IRWIN	ST. LOUIS METROP.	190
LEVY, JEROME F	ST. LOUIS METROP.	190
LEVY, MORTON A	ST. LOUIS METROP.	190
LEWELLEN, CHAS H	PIKE	186
LEWIN, W H	ST. LOUIS METROP.	190
LEWIS, CHAS R	ST. LOUIS METROP.	190
LEWIS, JAMES E	ST. LOUIS METROP.	190
LEWIS, REVIS C	JACKSON	098
LEWIS, ROBERT D	ST. LOUIS METROP.	190
LEWITTON, SOLOMON	JACKSON	098
LIANG, HOWARD S	ST. LOUIS METROP.	190
LIANG, JING C	JACKSON	098
LIAO, KUN T	ST. LOUIS METROP.	190
LICHTENSTEIN, JACK R	ST. LOUIS METROP.	190
LICHTOR, JOS M	JACKSON	098
LICHTY, CHAS A	M-R-S	130
LIE, SIEN H	JACKSON	098
LIEB, FRANCIS X	ST. LOUIS METROP.	190
LIEBERMAN, DAVID M	ST. LOUIS METROP.	190
LIEBHABER, HARVEY	ST. LOUIS METROP.	190
LILA, ARAM	CLAY	050
LILLY, DOUGLAS R	ST. LOUIS METROP.	190
LIM, IL T	ST. LOUIS METROP.	190
LIMPATARMONKOL, PIEMSAKDI	ST. LOUIS METROP.	190
LIMPIPHIPHATN, OHAJPHONG	PERRY-STE. GENEVIEVE	174
LIMPIPHIPHATN, ESTER P	PERRY-STE. GENEVIEVE	174
LIN, C H	C-M-M-R	046
LIN, CHI-HSI	GREENE COUNTY	082
LIN, EI S	C-M-M-R	046
LIN, H T	C-M-M-R	046
LINDBERG, DONALD A	BOONE	026
LINDEMAN, CARL H	ST. LOUIS METROP.	190
LINDEMAN, JOHN F	ST. LOUIS METROP.	190
LINDER, HOWARD E	ST. LOUIS METROP.	190
LINDGREN, CARLETON J	JACKSON	098
LINDQUIST, CARL N	JACKSON	098
LINK, ALEXANDER J	ST. LOUIS METROP.	190
LINK, VANCE E	JACKSON	098
LINS, ROBT D	ST. LOUIS METROP.	190
LINSENMEYER, CHARLES M	ST. CHARLES-LINCOLN	126
LINVILLE, HOWARD E	JACKSON	098
LIPSCHITZ, ERVIN	ST. LOUIS METROP.	190
LIPSITZ, ELLIS S	ST. LOUIS METROP.	190
LISCHER, CARL E	ST. LOUIS METROP.	190
LISCHWE, DANIEL H	ST. LOUIS METROP.	190
LISS, JAY L	ST. LOUIS METROP.	190
LISSNER, ARTHUR B	ST. LOUIS METROP.	190
LISTERMAN, JOHN C	GREENE COUNTY	082
LITTLE, MONROE H	ST. LOUIS METROP.	190
LITTLEJOHN, ROBERT T	CLAY	050
LITTMANN, LEWIS E	ST. LOUIS METROP.	190
LITTON, LYLE D	GREENE COUNTY	082
LITTON, LYNN O	BOONE	026
LITTON, NANCY J	JACKSON	098
LITWILLER, RAYMOND W	BOONE	026
LITZOW, LOUIS T	ST. LOUIS METROP.	190
LIU, BEN C	JACKSON	098
LIVINGSTON, DON G	ST. LOUIS METROP.	190
LLANES-RODAS, RIZALINA	CLAY	050
LLORENS, ALFRED S	BOONE	026
LOBECK, CHARLES C	BOONE	026
LOCKHART, CHAS E	GREENE COUNTY	082
LOCKWOOD, GARY F	JACKSON	098
LODWICK, GWILYM S	BOONE	026
LOEB, RICHARD H	GREENE COUNTY	082
LOEB, VIRGIL	ST. LOUIS METROP.	190
LOEFFEL, ELLEN S	ST. LOUIS METROP.	190
LOGIE, MAC D	ST. LOUIS METROP.	190
LOGUE, JOHN T	BOONE	026
LOHMAR, ROLAND E	BOONE	026
LOHR, ROBT W	ST. LOUIS METROP.	190
LOHRENTZ, LOIS H	JACKSON	098
LOITMAN, BERNARD S	ST. LOUIS METROP.	190
LONDE, ALAN M	ST. LOUIS METROP.	190
LONDE, SOL	ST. LOUIS METROP.	190
LONDON, STANLEY L	ST. LOUIS METROP.	190
LONERGAN, WARREN M	ST. LOUIS METROP.	190
LONG, CURTIS W	WEST CENTRAL	214
LONG, FRANK B	ST. LOUIS METROP.	190
LONG, R S	JACKSON	098
LONGENECKER, JOE L	JASPER	102
LONSWAY, MAURICE J	ST. LOUIS METROP.	190
LOPANSRI, SOMAK	DUNKLIN	070
LOPEZ-PLATA, ROBERTO	JACKSON	098
LOPPICCOLO, VINCENT J	ST. LOUIS METROP.	190
LOPPICCOLO, VINCENT J	ST. LOUIS METROP.	190
LORD, JAMES L	JACKSON	098
LORD, RICHARD E	ST. LOUIS METROP.	190
LORENC, ERNEST	GREENE COUNTY	082
LORENZO, EDILBERTO B	JACKSON	098
LORENZO-MEDINA, REMEDIOS	JACKSON	098
LOTTES, J O	ST. LOUIS METROP.	190
LOTUACO, GAMALIEL G	JACKSON	09
LOUGHEAD, JOHN R	B-W-R-C	03
LOUTZENHISER, JAMES K	JACKSON	09
LOVETT, ROBERT L	GREENE COUNTY	08
LOVINGGOOD, THOS A	CAPE GIRARDEAU	04
LOWE, ALVIN L	PETTIS	17
LOWE, HORACE A	GREENE COUNTY	08
LOWENSTEIN, PAUL S	ST. LOUIS METROP.	19
LOWTHER, GERALD S	ST. LOUIS METROP.	19
LOYD, EARL L	COLE	05
LOYND, ROBT C	ST. LOUIS METROP.	19
LU, FANG T	ST. LOUIS METROP.	19
LUCIDO, JOSEPH L	ST. LOUIS METROP.	19
LUCKENBILL, PAUL T	CLINTON	05
LUECHTEFELD, FRANK	ST. LOUIS METROP.	19
LUEDDE, PHILIP S	ST. LOUIS METROP.	19
LUEHRS, ROBT O	ST. LOUIS METROP.	19
LUETJE, CHARLES M	JACKSON	09
LUGO, SAML	ST. LOUIS METROP.	19
LUH, ANDREW M	ST. LOUIS METROP.	19
LUM, JON T	ST. LOUIS METROP.	19
LUND, HERLUF G	ST. LOUIS METROP.	19
LUND, ROBT H	ST. LOUIS METROP.	19
LUNDMAN, HUGH J	GREENE COUNTY	08
LURIE, HAROLD H	GREENE COUNTY	08
LUSK, CHAS A	WEST CENTRAL	21
LUTHER, GEORGE A	ST. LOUIS METROP.	19
LUTKEWITTE, JOS F	PERRY-STE. GENEVIEVE	17
LUTZ, MARTIN H	ST. LOUIS METROP.	19
LUZECKY, MICHAEL H	GREENE COUNTY	08
LYDDON, HAROLD R	JACKSON	098
LYLE, ROBT R	LAKE OF THE OZARKS	120
LYMAN, EDWARD H	ST. LOUIS METROP.	190
LYNCH, THOS W	GREENE COUNTY	082
LYNXWILER, CHESTER P	ST. LOUIS METROP.	190
LYSKOWSKI, MARIA M	CAPE GIRARDEAU	042
LYSS, CARL A	ST. LOUIS METROP.	190
LYSS, STANLEY B	ST. LOUIS METROP.	190
LYTTLE, GARNET C	ST. LOUIS METROP.	190

M

MABEN, SAM E	JACKSON	098
MAC CAUGHELTY, THOMAS C	ST. LOUIS METROP.	190
MAC DONALD, ROBT R	ST. LOUIS METROP.	190
MAC GEE, EDWIN E	JACKSON	098
MAC INNIS, FLORENCE E	JACKSON	098
MAC LAUGHLIN, JAMES C	JASPER	102
MAC NAUGHTON, RALPH E	JACKSON	098
MAC NAUGHTON, ROBT A	JACKSON	098
MACAULEY, BERNARD J	B-W-R-C	034
MACDONALD, KATHRYN	ST. LOUIS METROP.	190
MACDONALD, ROBIN R	JACKSON	098
MACDONALD, WM C	ST. LOUIS METROP.	190
MACDONNELL, THOS M	WEBSTER	210
MACHEK, OTAKAR	ST. LOUIS METROP.	190
MACLEOD, ANGUS	ST. LOUIS METROP.	19

MACNISH, JAMES M	ST. LOUIS METROP.	190
MADDIPATI, SREEDEZI	ST. LOUIS METROP.	190
MAODOX, ALBERT R	PETTIS	178
MADOURI, ARUNA D	B-W-R-C	034
MADDURI, SIVAPRASAD D	B-W-R-C	034
MADDUX, WM P	GREENE COUNTY	082
MADOC JONES, HYWEL	ST. LOUIS METROP.	190
MADRID, DOMINADOR O	ST. LOUIS METROP.	190
MAGALETTA, GEO E	CAPE GIRARDEAU	042
MAGEE, ROBT L	WEST CENTRAL	214
MAGEE, WM E	ST. LOUIS METROP.	190
MAGINN, R R	ST. LOUIS METROP.	190
MAGINN, RICHARD L	BUCHANAN	030
MAGNESS, GUY N	ST. LOUIS METROP.	190
MAGRUDER, LYELL M	WEST CENTRAL	214
MAHBOUBI, AZIZ O	SEMO	202
MAHE, GEO A	ST. LOUIS METROP.	190
MAHER, ROBT W	GREENE COUNTY	082
MAHER, THOS F	ST. LOUIS METROP.	190
MAIS, THOMAS E	JACKSON	098
MAJOR, TROY E	GREENE COUNTY	082
MAJORS, PATRICK F	ST. LOUIS METROP.	190
MAJORS, PATRICK F	ST. LOUIS METROP.	190
MAJZOUB, HISHAM S	JASPER	102
MALEK-AHMADI, PARVIZ	BOONE	026
MALIK, SARFRAZ A	ST. LOUIS METROP.	190
MALLOUK, ALEXANOER G	JACKSON	098
MALLOW, JAMES E	JACKSON	098
MALLYA, ASHOK R	ST. LOUIS METROP.	190
MALONEY, ROBT M	ST. LOUIS METROP.	190
MALT, SHERWIN H	ST. LOUIS METROP.	190
MALTBY, JAMES D	BOONE	026
MAMINTA, NAPOLEON S	ST. LOUIS METROP.	190
MANALO, GIL B	JASPER	102
MANANSALA, ANTONIO Q	ST. LOUIS METROP.	190
MANDLER, GEO	GRANO RIVER	078
MANES-MARTINEZ, JOSE	ST. LOUIS METROP.	190
MANGALAT, NARAYANAN K	JASPER	102
MANGELS, KENNETH A	JACKSON	098
MANGUM, WILLIAM B	JACKSON	098
MANGUNTA, VIJAYA K	CAPE GIRAROEAU	042
MANION, MARIA E	ST. LOUIS METROP.	190
MANION, PETER J	ST. LOUIS METROP.	190
MANION, THOS S	JACKSON	098
MANLEY, CHAS B	ST. LOUIS METROP.	190
MANN, ELIZABETH M	ST. LOUIS METROP.	190
MANN, JAMES K	M-R-S	130
MANNIS, CHARLES I	ST. LOUIS METROP.	190
MANSKE, PAUL R	ST. LOUIS METROP.	190
MANTELL, JACK M	GREENE COUNTY	082
MANTOVANI, JOHN F	ST. LOUIS METROP.	190
MANUBAY, TERESITA	DUNKLIN	070
MANUBAY, THEOOORO	OUNKLIN	070
MANUEL, LOUIS C	JACKSON	098
MAPLE, FRANCIS M	GREENE COUNTY	082
MARANAN, DIOSDADO L	ST. LOUIS METROP.	190
MARAVILLA, LEVY M	ST. LOUIS METROP.	190
MARCHOSKY-KOGAN, JOSE A	ST. LOUIS METROP.	190
MARCUS, MORRIS D	ST. LOUIS METROP.	190
MARDINI, EDWARO E	MINERAL AREA	138
MARGOLIS, DAVID M	ST. LOUIS METROP.	190
MARGOLIS, RICHARD M	ST. LOUIS METROP.	190
MARIENFELO, CARL J	BOONE	026
MARKIVEE, CARROLL R	BOONE	026
MARKS, JAMES	ST. LOUIS METROP.	190
MARKS, MARK M	JACKSON	098
MARMOR, WM A	ST. LOUIS METROP.	190
MARS, HARTLEY F	OZARKS	166
MARSH, ALICE	JACKSON	098
MARSH, JEFFREY L	ST. LOUIS METROP.	190
MARSHALL, CAMERON F	JACKSON	098
MARSHALL, HAL E	JACKSON	098
MARSHALL, WILLIAM G	HOWARD	094
MARSTON, FREDERICK J	BUCHANAN	030
MARTEL, OOMINIQUE J	ST. LOUIS METROP.	190
MARTI, LARRY B	MIO-MISSOURI	182
MARTIN, ANOREW O	SEMO	202
MARTIN, CATALINO V	JACKSON	098
MARTIN, CLARENCE A	JASPER	102
MARTIN, CLYOE V	JACKSON	098
MARTIN, OANL J	ST. LOUIS METROP.	190
MARTIN, DAVIO S	ST. LOUIS METROP.	190
MARTIN, FREOERICK W	ST. LOUIS METROP.	190
MARTIN, JAMES M	ST. LOUIS METROP.	190
MARTIN, JOHN B	ST. LOUIS METROP.	190
MARTIN, JOHN N	BUCHANAN	030
MARTIN, PHILIP L	ST. LOUIS METROP.	190
MARTIN, RICHARD A	CAPE GIRAROEAU	042
MARTIN, WENOELL J	PIKE	186
MARTINEZ, ARMANDO I	ST. LOUIS METROP.	190
MARTIREZ, EMMANUEL	ST. LOUIS METROP.	190
MARTY, OAVIO R	COLE	058
MARTZ, JOHN C	ST. LOUIS METROP.	190
MASON, WAYNE E	JACKSON	098
MASSIE, EOWARD	ST. LOUIS METROP.	190
MASTERS, EOWIN J	SEMO	202
MASTERS, WM H	ST. LOUIS METROP.	190
MASUCCI, JOS M	JACKSON	098
MATHES, STEPHEN J	ST. LOUIS METROP.	190
MATHEW, MALEAKAL S	ST. LOUIS METROP.	190
MATHEW, RUBY	ST. LOUIS METROP.	190
MATHEY, JOSEPH W	B-W-R-C	034
MATOVICH, VIOLET B	JACKSON	098
MATTA, CAMILLE S	JACKSON	098
MATTESON, FRANK B	NORTHWEST	158
MATTHEWS, JOHN G	ST. LOUIS METROP.	190
MATTHEWS, JOHN I	COLE	058
MAUGHS, SYONEY B	ST. LOUIS METROP.	190
MAX, PAUL F	ST. LOUIS METROP.	190
MAXSON, THEOOORE R	JOHNSON	110
MAXWELL, RICHARD W	ST. LOUIS METROP.	190
MAY, ALBERT L	B-W-R-C	034
MAYER, JOHN H	JACKSON	098
MAYER, ROBT A	ST. LOUIS METROP.	190
MAYFIELD, WM R	ST. LOUIS METROP.	190
MAYUGA, EDGARDO G	ST. LOUIS METROP.	190
MAYUGA, LAUREANO G	SOUTH CENTRAL	206
MC AOAM, CHAS R	ST. LOUIS METROP.	190
MC AFEE, CHESTER A	ST. LOUIS METROP.	190
MC AFEE, ROBT G	JACKSON	098
MC ALHANY, HOWARD J	GREENE COUNTY	082
MC ALISTER, WM H	ST. LOUIS METROP.	190
MC ALLISTER, CHARLES K	JACKSON	098
MC ANELLY, GEORGE C	B-W-R-C	034
MC ARTOR, THOS R	GRAND RIVER	078
MC BURNEY, CHAS A	SALINE	198
MC CAFFREE, MARY K	COLE	058
MC CALL, EDWIN L	ST. LOUIS METROP.	190
MC CALLA, JOHN P	JACKSON	098
MC CALLISTER, BEN D	JACKSON	098
MC CANN, LOUIS P	WEST CENTRAL	214
MC CANSE, ANDREW	JACKSON	098
MC CANSE, LYNN R	JACKSON	098
MC CARTHY, JOHN M	ST. LOUIS METROP.	190
MC CARTY, MICHAEL	ST. LOUIS METROP.	190
MC CAUGHAN, JOHN M	ST. LOUIS METROP.	190
MC CLANAHAN, ROBT C	JACKSON	098
MC CLOSKEY, ROBT B	ST. LOUIS METROP.	190
MC CLUGGAGE, NEWTON C	CLAY	050
MC CLURE, OAVIO N	ST. LOUIS METROP.	190
MC CONAHAY, OAVIO R	JACKSON	098
MC CONCHIE, JAMES E	JACKSON	098
MC COOL, JAMES F	ST. LOUIS METROP.	190
MC COOL, STANLEY	ST. LOUIS METROP.	190
MC CORO, E S	BOONE	026
MC CORKLE, E L	SALINE	198
MC CORMICK, JAMES E	CLAY	050
MC COWN, ALLAN H	ST. LOUIS METROP.	190
MC COY, FREOERICK J	JACKSON	098
MC COY, WARREN R	PEMISCOT	170
MC CRAW, DOYLE C	O-H-P-O	066
MC CRAY, GLEN M	JACKSON	098
MC CREA, WM A	GREENE COUNTY	082
MC CULLOUGH, CAMPBELL	JACKSON	098
MC OANIEL, JOHN R	BUCHANAN	030
MC OAVIO, ROBERT E	BOONE	026
MC OERMOTT, ALFREO E	PERRY-STE. GENEVIEVE	174
MC DONALO, EUGENE F	CAPE GIRARDEAU	042
MC OONALO, HERBERT L	JACKSON	098
MC OONALO, WALLACE	BUCHANAN	030
MC OONALO, WILBUR P	BUCHANAN	030
MC OONNELL, JOHN F	JACKSON	098
MC ELROY, CARLA N	JACKSON	098
MC ELROY, GLENN L	BOONE	026
MC ELROY, MICHAEL B	CLAY	050

MC FADDEN, GENE A	LAFAYETTE-RAY	118
MC FARLAND, H R	JACKSON	098
MC FARLAND, M D	JACKSON	098
MC GANNON, PAUL T	JACKSON	098
MC GINNIS, WM F	ST. LOUIS METROP.	190
MC GINTY, CHAS P	CAPE GIRARDEAU	042
MC GONIGLE, JAMES P	JASPER	102
MC GONIGLE, MICHAEL M	JASPER	102
MC GUIRE, THOS H	JACKSON	098
MC HANEY, JOHN W	COLE	058
MC INTOSH, DONALD E	JACKSON	098
MC INTOSH, MICHELE C	JACKSON	098
MC INTYRE, JOHN D	JACKSON	098
MC KASKLE, CLARENCE W	PEMISCOT	170
MC KEE, FRANK E	JACKSON	098
MC KEE, OLIVER A	ST. LOUIS METROP.	190
MC KEE, WALLACE P	JACKSON	098
MC KEEL, THOS B	JACKSON	098
MC KINNEY, JOE K	ST. LOUIS METROP.	190
MC KNELLY, WM V	JACKSON	098
MC LANE, JERRY F	B-W-R-C	034
MC LAUGHLIN, DURNELL	JACKSON	098
MC LAUGHLIN, KATHLEEN S	ST. LOUIS METROP.	190
MC LAUGHLIN, RICHARD D	GREENE COUNTY	082
MC LEAN, ROYAL C	ST. LOUIS METROP.	190
MC LEMORE, WILLIE O	JACKSON	098
MC MILLAN, DAVID L	OZARKS	166
MC MILLAN, THOS E	JACKSON	098
MC MILLEN, JAMES J	BUCHANAN	030
MC MULLIN, FORBES A	ST. LOUIS METROP.	190
MC MURRAY, HERBERT C	ST. LOUIS METROP.	190
MC NA8NEY, W K	JACKSON	098
MC NALLEY, MICHAEL	ST. LOUIS METROP.	190
MC NAMARA, JOHN J	ST. LOUIS METROP.	190
MC NEEL, LEE A	D-H-P-D	066
MC NUTT, THEODORE L	JACKSON	098
MC PHEE, WM R	CLAY	050
MC PIKE, LLOYD H	JASPER	102
MC SWINEY, JOHN G	ST. LOUIS METROP.	190
MCCLENNAN, 8RUCE L	ST. LOUIS METROP.	190
MEADOR, JAMES R	ST. LOUIS METROP.	190
MEADOWS, CHAS D	ST. LOUIS METROP.	190
MECHLIN, DAVID C	BOONE	026
MEDLER, JOHN F	ST. LOUIS METROP.	190
MEDLER, PAUL L	ST. LOUIS METROP.	190
MEDLEY, BENJAMIN E	JACKSON	098
MEDLICOTT, WILLIAM J	JACKSON	098
MEDRANO, CRESENCIANO A	ST. LOUIS METROP.	190
MEDRANO, LINA E	ST. LOUIS METROP.	190
MEEGAN, ROBT J	JACKSON	098
MEHAN, DONALD J	ST. LOUIS METROP.	190
MEHRA, RAVINDER B	ST. LOUIS METROP.	190
MEHRA, S K	ST. LOUIS METROP.	190
MEHRA, USHA	ST. LOUIS METROP.	190
MEHTA, SATISH K	JACKSON	098
MEIER, FRANCIS X	COLE	058
MEIKLEJOHN, DUNCAN C	JACKSON	098
MEINBERG, WM H	ST. LOUIS METROP.	190
MEINERS, PAUL N	ST. LOUIS METROP.	190
MEINERS, THEODORE M	ST. LOUIS METROP.	190
MEINERSHAGEN, CHAS W	COLE	058
MELGAARD, SVEN R	JACKSON	098
MELICK, WM F	ST. LOUIS METROP.	190
MELL, ROGER L	ST. LOUIS METROP.	190
MELSON, GLENN L	ST. LOUIS METROP.	190
MELTZER, DAVID W	ST. LOUIS METROP.	190
MEMULA, NARAYANAGOUD	BOONE	026
MENCHETTI, DONALD E	GREENE COUNTY	082
MENDELSOHN, GEORGE	ST. LOUIS METROP.	190
MENDELSOHN, ROBT S	ST. LOUIS METROP.	190
MENDELSON, DAVID F	ST. LOUIS METROP.	190
MENDEZ, MANUEL	ST. LOUIS METROP.	190
MENDEZ, MARIA A	GREENE COUNTY	082
MENDONSA, LAWRENCE E	ST. LOUIS METROP.	190
MENENDEZ, JOSE O	JACKSON	098
MENENDEZ, MANUEL	ST. LOUIS METROP.	190
MENESES, ORLANDO G	ST. LOUIS METROP.	190
MENNE, MARVIN C	MINERAL AREA	138
MENTGEN, CARL N	GREENE COUNTY	082
MEREDITH, WILLIAM R	JASPER	102
MERENDA, SAM J	ST. LOUIS METROP.	190
MERIDETH, MARY J	OZARKS	166
MERIWETHER, DON R	8UCHANAN	030
MERRIMS, THEODORE	ST. LOUIS METROP.	190
MERRITT, BURCH A	ST. LOUIS METROP.	190
MERVEILLE, OCTAVE C	JACKSON	098
MESTRES, HUGH M	ST. LOUIS METROP.	190
METZ, CHAS O	ST. LOUIS METROP.	190
METZL, KURT	JACKSON	098
METZLER, MICHAEL H	BOONE	026
MEYER, HARRY E	ST. LOUIS METROP.	190
MEYER, HERMAN M	ST. LOUIS METROP.	190
MEYER, JAMES E	ST. LOUIS METROP.	190
MEYER, JAY L	ST. LOUIS METROP.	190
MEYER, JERRY L	LAFAYETTE-RAY	118
MEYER, JOHN C	BOONE	026
MEYER, JOHN S	ST. LOUIS METROP.	190
MEYER, JOHN W	GREENE COUNTY	082
MEYER, MELVIN E	ST. LOUIS METROP.	190
MEYER, PAUL W	JACKSON	098
MEYER, WAYNE W	ST. LOUIS METROP.	190
MEYERS, ELSIE E	ST. LOUIS METROP.	190
MEYERS, JERRY R	ST. CHARLES-LINCOLN	126
MEYERS, JOHN B	ST. LOUIS METROP.	190
MEYERS, ROBT W	ST. LOUIS METROP.	190
MEZERA, RAYMOND A	ST. LOUIS METROP.	190
MEZOFF, JOHN M	BOONE	026
MICHAEL, HARVEY R	GREENE COUNTY	082
MICHAEL, KENNETH D	ST. LOUIS METROP.	190
MICHAEL, VERNON E	ST. LOUIS METROP.	190
MICHAELREE, JOHN F	ST. LOUIS METROP.	19
MICHAELS, ROBERT	GREENE COUNTY	08
MICIANO, TAAY R	C-M-M-R	04
MIDDLETON, JERRY N	ST. LOUIS METROP.	19
MIDDLETON, JOHN W	PIKE	18
MIER, THOS M	ST. LOUIS METROP.	19
MIHALEVICH, JOHN A	GREENE COUNTY	08
MIKHAIL, GIRGIS	ST. LOUIS METROP.	19
MIKOLAJCZAK, JAMES	ST. LOUIS METROP.	19
MILDER, BARRY D	ST. LOUIS METROP.	19
MILDER, BENJ	ST. LOUIS METROP.	19
MILES, GEO O	JACKSON	09
MILES, JUDITH H	BOONE	02
MILES, PAUL W	ST. LOUIS METROP.	19
MILES, WAYNE B	ST. CHARLES-LINCOLN	12
MILGRAM, 8YRON A	JACKSON	09
MILL, WM B	ST. LOUIS METROP.	19
MILLANGUE, CONSOLACION P	ST. LOUIS METROP.	19
MILLANGUE, RAFAEL M	ST. LOUIS METROP.	19
MILLER, CHARLES W	ST. LOUIS METROP.	19
MILLER, CHAS	ST. LOUIS METROP.	19
MILLER, CLINT L	JACKSON	09
MILLER, D H	C-M-M-R	04
MILLER, DAVID D	GREENE COUNTY	08
MILLER, DAVID V	B-W-R-C	03
MILLER, EDWARD J	ST. LOUIS METROP.	19
MILLER, GEOFFREY W	ST. LOUIS METROP.	19
MILLER, GERALD L	JACKSON	09
MILLER, GERALD L	JACKSON	09
MILLER, JAMES E	ST. LOUIS METROP.	19
MILLER, JAMES R	ST. LOUIS METROP.	19
MILLER, JULE P	ST. LOUIS METROP.	19
MILLER, LE R	BOONE	02
MILLER, MAX I	JACKSON	09
MILLER, NORMAN C	ST. LOUIS METROP.	19
MILLER, ROBT N	ST. LOUIS METROP.	19
MILLER, THOMAS	CLAY	05
MILLER, WILLIAM	ST. LOUIS METROP.	19
MILLER, WILSON H	JACKSON	09
MILLER, WM V	ST. LOUIS METROP.	19
MILLIKAN, LARRY E	BOONE	02
MILNE, JAY L	GREENE COUNTY	08
MILSTEAD, KENNETH L	ST. LOUIS METROP.	19
MILSTER, CLYDE R	ST. LOUIS METROP.	19
MILTENBERGER, PAUL C	DUNKLIN	07
MINNIGERODE, LANA K	JACKSON	09
MINNIGERODE, TURNER L	JACKSON	09
MINNIHAN, ROBT W	ST. LOUIS METROP.	19
MINTON, ROBT S	BUCHANAN	03
MIR, ABDUL R	JACKSON	09
MIRBAHA, MITCHELL M	ST. LOUIS METROP.	19
MISHKIN, MARVIN R	ST. LOUIS METROP.	19
MISKOVSKY, EMIL F	ST. LOUIS METROP.	19
MISSEY, WILBURN C	ST. LOUIS METROP.	19
MISTRY, TEHMTON S	ST. LOUIS METROP.	19

ITCHELL, ANDREW D	JACKSON	098
ITCHELL, EUGENE N	ST. LOUIS METROP.	190
ITCHELL, FRANKLIN L	BOONE	026
ITCHELL, JDHN D	JACKSDN	098
ITCHELL, KENNETH	ST. LOUIS METROP.	190
ITCHELL, LYNN D	BOONE	026
ITCHELL, ROBT H	JACKSON	098
ITCHELL, ROY E	MID-MISSOURI	182
ITCHELL, THOS J	F-G-W	074
ITHEN, FRANCIS A	ST. LOUIS METROP.	190
ITRA, NIRMAL K	JACKSON	098
IXSON, WM C	JACKSON	098
IZELL, MYRON W	GREENE COUNTY	082
OOIN, JEFFREY J	ST. LOUIS METROP.	190
OELLENHOFF, ROBT W	F-G-W	074
DELLER, FRANK D	ST. LOUIS METROP.	190
OEN, BERWYN H	BUCHANAN	030
OHAPATRA, RAJ N	ST. LOUIS METROP.	190
OHINDRA, SUBOOH K	ST. LOUIS METROP.	190
OLDEN, C S	ST. LOUIS METROP.	190
OLDEN, CHAS A	ST. LOUIS METROP.	190
OLITOR, JEROME A	ST. LOUIS METROP.	190
ONAFO, WM W	ST. LOUIS METROP.	190
ONAT, SEYMOUR M	ST. LOUIS METROP.	190
ONROE, CARROLL O	BOONE	026
ONSEES, BARBARA	ST. LOUIS METROP.	190
DNTA, MANOE D	BUCHANAN	030
ONTANI, CHAS	ST. LOUIS METROP.	190
ONTELLANO, ARTURO H	OZARKS	166
ONTELLO, SAMUEL A	JACKSON	098
ONTERUBIO, FRED R	ST. LOUIS METROP.	190
ONTES, ARTURO C	ST. LOUIS METROP.	190
ONTES DE OCA, JULIO	ST. LOUIS METROP.	190
ONTGOMERY, AUSTIN F	ST. LOUIS METROP.	190
ONTIE, JOS E	BOONE	026
OOLSINTONG, PORNCHAI	ST. LOUIS METROP.	190
OON, AGNES H	BOONE	026
OON, THOS R	ST. LOUIS METROP.	190
ODNEY, JUSTIN L	JACKSON	098
OORE, ALVA	ST. LOUIS METROP.	190
OORE, CANDICE A	WEST CENTRAL	214
DORE, OAVID L	JACKSON	098
DORE, DE A	GREENE COUNTY	082
ODRE, HARRY G	ST. LOUIS METROP.	190
ODRE, HARRY G	ST. LOUIS METROP.	190
OORE, JACK D	JACKSON	098
OORE, MICHAEL T	WEST CENTRAL	214
ODRE, ROBT A	JACKSON	098
OORE, WALTER L	ST. LOUIS METROP.	190
DRALES, JULIO	ST. LOUIS METROP.	190
ORAN, THOS M	ST. LOUIS METROP.	190
ORANVILLE, BENEDICT A	BOONE	026
DREANO, ARMANDO H	JACKSON	098
OREHEAO, WM E	DUNKLIN	070
ORGAN, OAVIO B	JACKSON	098
MORGAN, HARRY C	ST. LOUIS METROP.	190
MDRGAN, STEPHAN S	ST. LOUIS METRDP.	190
MORGAN, WILLY J. C.	ST. LOUIS METROP.	190
MORGAN, WINFREY T	SOUTH CENTRAL	206
MORGAN, WM R	JACKSON	098
MORITZ, GERALD	ST. LOUIS METROP.	190
MORLEY, LOUISE A	JACKSON	098
MORRIN, KEVIN	ST. LOUIS METROP.	190
MORRIS, ALAN O	BOONE	026
MORRIS, ALAN H	ST. LOUIS METROP.	190
MORRIS, HARVEY E	ST. LOUIS METROP.	190
MORRIS, J H	JACKSON	098
MORRIS, MARY E	ST. LOUIS METROP.	190
MORRISON, ARLEN E	ST. LOUIS METROP.	190
MORRISON, OONALD H	JACKSON	098
MORRISON, J S	JACKSON	098
MORRISON, THOS A	OZARKS	166
MORSE, JOHN P	8UCHANAN	030
MORSE, MARVIN W	BUCHANAN	030
MORTENSEN, FREDE	ST. LOUIS METROP.	190
MORTON, PAUL C	GREENE COUNTY	082
MORTON, WAYNE L	WEST CENTRAL	214
MOSBACHER, HUGH E	JACKSON	098
MOSBY, LARRY D	BOONE	026
MOSELEY, FREOERICK T	GREENE COUNTY	082
MOSELEY, OTIS O	LAKE OF THE OZARKS	120
MOSES, ROBT A	ST. LOUIS METROP.	190
MOSLEY, JULIAN C	ST. LOUIS METROP.	190
MOSQUERA, JAIME J	ST. LOUIS METROP.	190
MOSS, PAUL	JACKSON	098
MOTHERSHEAO, JOHN L	BUCHANAN	030
MOTZEL, ALBERT J	ST. LOUIS METROP.	190
MOU, BIN	WEST CENTRAL	214
MOUNTFORD, DAMON W	JACKSON	098
MOWREY, WM O	ST. LOUIS METROP.	190
MUCKERMAN, RICHARO I	ST. LOUIS METROP.	190
MUOO, J F	ST. LOUIS METROP.	190
MUELHEIMS, GERHARO H	ST. LOUIS METROP.	190
MUELLER, ADOLPH R	JASPER	102
MUELLER, CLARENCE E	ST. LOUIS METROP.	190
MUELLER, JOS A	ST. LOUIS METROP.	190
MUELLER, MARTIN J	JACKSON	098
MUELLER, MORRIS A	ST. LOUIS METROP.	190
MUELLER, ROBT	ST. LOUIS METROP.	190
MUELLER, ROBT J	ST. LOUIS METROP.	190
MUELLER, WILBUR K	ST. LOUIS METROP.	190
MUENCH, ALBERT H	BUCHANAN	030
MUENCH, LAURENCE W	JACKSON	098
MUENSTER, VINCENT P	ST. CHARLES-LINCOLN	126
MUHM, HARVARO Y	ST. CHARLES-LINCOLN	126
MUJUMDAR, SUHAS P	ST. LOUIS METROP.	190
MULLARKY, WILBUR A	ST. LOUIS METROP.	190
MULLEN, JACK	MINERAL AREA	138
MULLEN, LEO M	JACKSON	098
MULLEN, MARY E	AUORAIN	014
MULLICAN, CHAS N	BUCHANAN	030
MULLIGAN, LEO V	ST. LOUIS METRDP.	190
MULLINS, 8ERNARO L	CLAY	050
MULLINS, JDHN E	ST. LOUIS METROP.	190
MUNDY, WM L	JACKSON	098
MUNSCH, ROBERT F	ST. LOUIS METROP.	190
MUNYAN, EARL A	JACKSON	098
MUROOCK, NATHANIEL	ST. LOUIS METROP.	190
MURNEY, JOSEPH	F-G-W	074
MURPHY, BERNARO L	M-R-S	130
MURPHY, GEO E	ST. LOUIS METROP.	190
MURPHY, JAMES A	BUCHANAN	030
MURPHY, JAMES J	JACKSON	098
MURPHY, JAMES P	ST. LOUIS METROP.	190
MURPHY, JOHN C	ST. LOUIS METROP.	190
MURPHY, ROBT J	JACKSON	098
MURPHY, WM A	ST. LOUIS METROP.	190
MURRAY, W L	JACKSON	098
MUSCHANY, NORMAN K	ST. LOUIS METROP.	190
MUSGRAVE, OAVID E	CLAY	050
MUSICH, THOMAS F	ST. LOUIS METROP.	190
MUTCHNICK, NORMAN	JACKSON	098
MUTH, ROBT G	JACKSON	098
MYERS, ANOREW I	JACKSON	098
MYERS, CARL M	CLAY	050
MYERS, OAVID W	CLAY	050
MYERS, GARY H	ST. LOUIS METROP.	190
MYERS, GEO H	JACKSON	098
MYERS, IVAN T	ST. LOUIS METROP.	190
MYERS, JAMES M	MIO-MISSOURI	182
MYERS, JOHN S	JACKSON	098
MYERS, ROBT M	JACKSON	098
MYRON, MARK C	JACKSON	098

N

NAOINOLA, CHENNAIAH C	AUORAIN	014
NAGY, A L	B-W-R-C	034
NAHM, CHUNG C	ST. LOUIS METROP.	190
NAIOU, GONUGUNTLA	ST. LOUIS METROP.	190
NAIME, MANSOUR J	JACKSON	098
NAIR, K	ST. LOUIS METROP.	190
NAKAOA, JAMES R	ST. LOUIS METROP.	190
NALAGAN, MARCOS C	ST. LOUIS METROP.	190
NAPPER, MARVIN L	GREENE COUNTY	082
NARAYAN, DILIP L	ST. LOUIS METROP.	190
NARKIEWICZ, LAWRENCE S	ST. LOUIS METROP.	190
NARYKA, JOS J	ST. LOUIS METROP.	190
NASEER, RIAZ A	ST. LOUIS METROP.	190
NASH, HELEN E	ST. LOUIS METROP.	190
NASH, HOMER E	ST. LOUIS METROP.	190
NATHAN, LESTER J	ST. LOUIS METROP.	190
NAVARRO, MANUEL I	BOONE	026
NAVATO, JOSE M	JACKSON	098
NEAR, OAVIO M	ST. LOUIS METROP.	190
NEBLETT, LEWIS M	GREENE COUNTY	082
NELSON, BENTLEY A	JACKSON	098

NELSON, DAVID E	GREENE COUNTY	082
NELSON, JAMES S	ST. LOUIS METROP.	190
NELSON, JOHN R	ST. LOUIS METROP.	190
NEMEC, STANLEY S	ST. LOUIS METROP.	190
*NEMER, ROBT J	COLE	058
NESS, CARL K	BUCHANAN	030
NESSELRODE, JOHN H	JACKSON	098
NESTER, CHARLES A	ST. LOUIS METROP.	190
NEU, LEO T	GREENE COUNTY	082
NEUBEISER, BEN L	ST. CHARLES-LINCOLN	126
NEUKOM, GEO B	MINERAL AREA	138
NEUMAN, NEAL	ST. LOUIS METROP.	190
NEUMANN, JAMES W	JACKSON	098
NEWCOMB, ARTHUR D	MINERAL AREA	138
NEWMAN, MATTHEW	ST. LOUIS METROP.	190
NEWMAN, PERCY	ST. LOUIS METROP.	190
NEWMAN, ROBT L	JACKSON	098
NEWMARK, LEONARD N	ST. LOUIS METROP.	190
NEWPORT, GERALD	ST. LOUIS METROP.	190
NEWTON, GORDON	ST. LOUIS METROP.	190
NEWTON, WM T	ST. LOUIS METROP.	190
NICHOLIS, GEORGE R	JACKSON	098
NICHOLS, STEVEN H	ST. LOUIS METROP.	190
NICHOLS, WALTER K	BOONE	026
NICKEL, JAMES F	ST. LOUIS METROP.	190
NICKELS, MATHEW L	PIKE	186
NICOLAI, CHAS H	ST. LOUIS METROP.	190
NICOLAUS, WILLIAM H	BOONE	026
NICOLAY, WM R	MINERAL AREA	138
NIEDERMEYER, EDWARD L	NORTHWEST	158
NIEDERMEYER, GEO J	ST. LOUIS METROP.	190
NIELSON, MICHAEL H	JACKSON	098
NIESEN, FRANK J	ST. LOUIS METROP.	190
NIEUWENHUIZEN, MAARTEN	BOONE	026
NIEVA, DELFIN T	ST. LOUIS METROP.	190
NIGH, CHAS A	ST. LOUIS METROP.	190
NIGRO, EDWARD R	JACKSON	098
NIGRO, JOS A	JACKSON	098
NISHI, TOSHIO	ST. LOUIS METROP.	190
NIXON, EDWARD E	GRAND RIVER	078
NOBACK, RICHARDSON K	JACKSON	098
NOLAN, CHAS J	ST. LOUIS METROP.	190
NOLLER, HENRY W	ST. LOUIS METROP.	190
NOLPH, GEORGIA J	BOONE	026
NOLPH, KARL D	BOONE	026
NOLTENSMEYER, MILTON H	JACKSON	098
NOMURA, ROY M	ST. LOUIS METROP.	190
NORLAND, CHAS C	ST. LOUIS METROP.	190
NORONHA, REYNOLD F	ST. LOUIS METROP.	190
NOUHAN, JOS G	ST. LOUIS METROP.	190
NOURBAKHSH, MAHMOUD M	CLAY	050
NOURI, HASSAN	ST. LOUIS METROP.	190
NOVACK, MARK A	ST. LOUIS METROP.	190
NOVAK, EDWARD J	JACKSON	098
NUETZEL, JOHN A	ST. LOUIS METROP.	190
NUNEZ, MARIA A	ST. LOUIS METROP.	190
NYE, ROBT S	ST. LOUIS METROP.	190

O

O'BANNON, LON W	ST. LOUIS METROP.	190
O'BRIEN, EDWARD C	ST. LOUIS METROP.	190
O'BRIEN, EDWARD J	ST. LOUIS METROP.	190
O'BRIEN, HARRY F	AUDRAIN	014
O'BRIEN, ROBERT M	ST. LOUIS METROP.	190
O'CONNELL, TIMOTHY	ST. LOUIS METROP.	190
O'CONNOR, ROBT J	ST. LOUIS METROP.	190
O'CONNOR, WM B	BUCHANAN	030
O'DONNELL, JOS V	ST. LOUIS METROP.	190
O'DOWD, JAMES A	ST. LOUIS METROP.	190
O'FARRELL, THOS P	JACKSON	098
O'HEARNE, JOHN J	JACKSON	098
O'KEEFE, JOS D	ST. LOUIS METROP.	190
O'KELL, RICHARD T	JACKSON	098
O'MALLEY, JAMES F	JACKSON	098
O'NEAL, LAWRENCE W	ST. LOUIS METROP.	190
O'NEAL, PATRICIA L	ST. LOUIS METROP.	190
O'NEIL, JAMES H	JACKSON	098
O'REILLY, D E	ST. LOUIS METROP.	190
O'SULLIVAN, DANL F	ST. LOUIS METROP.	190
OAKES, CECIL E	COLE	058
OAKLEY, MARGARET M	ST. LOUIS METROP.	190
OBADINA, OLUKUNLE O	ST. LOUIS METROP.	190
OBANDO, FRANCISCO J	ST. CHARLES-LINCOLN	126
OBERMEYER, CHAS G	ST. LOUIS METROP.	190
OCCENO, VICTOR G	OZARKS	166
OEHLER, WILLIAM F	CAPE GIRARDEAU	042
OESTREICH, ALAN E	BOONE	026
OETTER, DONALD L	ST. LOUIS METROP.	190
OGLESBY, RICHARD B	ST. LOUIS METROP.	190
OGNYANOV, VOISLAV F	ST. LOUIS METROP.	190
OGURA, JOS H	ST. LOUIS METROP.	190
OHLMS, DAVID L	ST. LOUIS METROP.	190
OHMOTO, MASAO	ST. LOUIS METROP.	190
OJASCASTRO, ALEJANDRO C	ST. LOUIS METROP.	190
OKUN, EDWARD	ST. LOUIS METROP.	190
OLANDER, DAVID S	ST. LOUIS METROP.	190
OLIVE, GEO C	OZARKS	166
OLIVER, GEO A	MINERAL AREA	138
OLLINGER, HENRY G	ST. LOUIS METROP.	190
*OLMSTEAD, JOHN P	CLAY	050
OLNEY, JOHN W	ST. LOUIS METROP.	190
OLSON, ELBERT R	GREENE COUNTY	082
OLSON, LLOYD C	JACKSON	098
OLSON, RICHARD O	ST. CHARLES-LINCOLN	126
OLSON, ROBT E	ST. LOUIS METROP.	190
OMELL, GARY H	ST. LOUIS METROP.	190
ONG, ENG L	ST. LOUIS METROP.	190
ONG, CFELIA S	ST. LOUIS METROP.	190
ONKEN, HENRY D	ST. LOUIS METROP.	190
OPPENHEIMER, HENRY E	ST. LOUIS METROP.	190
ORDOUKHANIAN, TATOOL A	ST. CHARLES-LINCOLN	1
ORENSTEIN, JOSEPH M	ST. LOUIS METROP.	1
ORGEL, MAURICE N	ST. LOUIS METROP.	1
ORGEL, STUART M	ST. LOUIS METROP.	1
ORILLE, OSCAR P	ST. LOUIS METROP.	1
ORSAY, PAUL K	ST. LOUIS METROP.	1
ORTBALS, DAVID W	ST. LOUIS METROP.	1
ORTH, OLIVER G	BOONE	0
ORTIGUERO, LEOPOLDO M	ST. LOUIS METROP.	1
ORTILLO, AMADO P	ST. LOUIS METROP.	19
ORTMEYER, LEROY F	ST. LOUIS METROP.	19
OSBORNE, JERE O	JACKSON	09
OSBOURN, RICHARD A	CALLAWAY	03
OSKINS, PERRY B	BOONE	02
OSSMAN, JULIAN A	COLE	05
OST, MARK D	JACKSON	09
OSTAPOWICZ, FRANK	ST. LOUIS METROP.	19
OTT, FLETCHER T	ST. LOUIS METROP.	19
OTT, HAROLD J	ST. LOUIS METROP.	19
OTT, HAROLD J	ST. LOUIS METROP.	19
OTT, WM J	ST. LOUIS METROP.	19
OTTENSMEYER, CHAS D	ST. LOUIS METROP.	19
OTTO, THOMAS G	CAPE GIRARDEAU	04
OTTOLINI, JAMES L	ST. LOUIS METROP.	19
OVEREND, DONALD S	GREENE COUNTY	08
OVERESCH, HARRY B	JACKSON	09
OVERHOLSER, MILTON D	BOONE	02
OWEN, ROBT F	ST. LOUIS METROP.	19
OWENS, JAMES L	JACKSON	09
OWENS, JOHN H	PETTIS	17
OWENS, RICHARD L	JACKSON	09
OWENS, ROBT H	JACKSON	09
OWENS, WM D	ST. LOUIS METROP.	19
OXENHANDLER, RONALD W	BOONE	02
OXLEY, DWIGHT K	JACKSON	09
OZAR, MILTON B	JACKSON	09
OZENBERGER, LARRY A	CLINTON	05
OZMAT, ORHAN M	ST. LOUIS METROP.	19

P

PACK, GARY L	JACKSON	09
PACKMAN, PAUL	ST. LOUIS METROP.	19
PACKMAN, ROBT C	ST. LOUIS METROP.	19
PACULDO, NORA N	BUCHANAN	03
PADDOCK, CHAS S	JASPER	10
PADDOCK, GEORGE O	GREENE COUNTY	08
PADILLA, DOMINGO	ST. LOUIS METROP.	19
PADILLA, TERESITA C	ST. LOUIS METROP.	19
PADULA, RICHARD T	JACKSON	09
PAEZ, MAURO A	ST. LOUIS METROP.	19
PAGE, JESSE W	SEMO	20
PAINE, ROBT	ST. LOUIS METROP.	19
PAINTER, ANDREW E	PEMISCOT	17
PAINTER, LATTIE B	PEMISCOT	1
PAKULA, SIDNEY F	JACKSON	09
PALAZOLA, JOSEPH M	JACKSON	09

---

* Doctor of Osteopathy

PALAZZO, FRANK A	ST. LOUIS METROP.	190
PALCHEFF, CHRIS L	GREENE COUNTY	082
PALEN, JAMES E	CAPE GIRARDEAU	042
PALENSKE, ROBT L	OUNKLIN	070
PALETTA, FRANCIS X	ST. LOUIS METROP.	190
PALETTA, FRANK	ST. LOUIS METROP.	190
PALETTA, THEODORE L	ST. LOUIS METROP.	190
PALETTA, VICTOR L	ST. LOUIS METROP.	190
PALMBERG, PAUL F	ST. LOUIS METROP.	190
PALMER, RUSSELL H	M-R-S	130
PALMERI, VICENTE C	CLAY	050
PAPPALARDO, CARLOS	ST. LOUIS METROP.	190
PAPRECK, K T	SALINE	198
PARDO, LEOPOLDO P	ST. LOUIS METROP.	190
PARELMAN, ALLEN G	JACKSON	098
PARIKH, SHARAD P	ST. LOUIS METROP.	190
PARIS, WM H	ST. LOUIS METROP.	190
PARK, AGATHA L	ST. LOUIS METROP.	190
PARK, DUK J	JEFFERSON	106
PARK, KUN H	JEFFERSON	106
PARK, WM I	GREENE COUNTY	082
PARK, YOUNG E	GRAND RIVER	078
PARKER, ARTHUR C	B-W-R-C	034
PARKER, BRENT M	BOONE	026
PARKER, HUBERT M	JACKSON	098
PARKER, THOS W	ST. LOUIS METROP.	190
PARKINS, GEORGE K	JACKSON	098
PARKISON, DONALD E	OZARKS	166
PARKS, CHARLES	ST. LOUIS METROP.	190
PARRAGA, HUMBERTO C	BOONE	026
PARSONS, BERNIE	NORTHWEST	158
PARSONS, D L	CAPE GIRARDEAU	042
PARSONS, EUGENE O	JACKSON	098
PARSONS, RICHARD P	ST. LOUIS METROP.	190
PARTAMIAN, KRIKOR	BUCHANAN	030
PARTAP, PRABHA	ST. LOUIS METROP.	190
PARULEKAR, DILIP G	CALLAWAY	038
PARWATIKAR, SADASHIY D	ST. LOUIS METROP.	190
PASIA, EBELLO T	ST. LOUIS METROP.	190
PASKAR, LARRY D	ST. LOUIS METROP.	190
PASSANANTE, BARTHOLOMEW M	ST. LOUIS METROP.	190
PATEL, B K	ST. LOUIS METROP.	190
PATEL, MUNIKUMAR H	JACKSON	098
PATEL, SHARAD B	ST. LOUIS METROP.	190
PATRICK, ROMAN L	ST. LOUIS METROP.	190
PATTERSON, CARROLL D	CLAY	050
PATTERSON, DONALD R	JASPER	102
PATTERSON, GROVER S	JASPER	102
PAUL, PAUL V	ST. LOUIS METROP.	190
PAULL, BARRY R	ST. LOUIS METROP.	190
PAULSON, GORDON S	BUCHANAN	030
PAVLU, ROBT R	LAFAYETTE-RAY	118
PAWSAT, JOHN E	JACKSON	098
PAYNE, DAVID E	BOONE	026
PAYNE, JOHN W	BOONE	026
PAYNE, MEREDITH C	ST. LOUIS METROP.	190
PAYNE, RICHARD L	ST. LOUIS METROP.	190
PAYNE, VAUGHN C	ST. LOUIS METROP.	190
PEARLMAN, ALAN L	ST. LOUIS METROP.	190
PEARLMAN, MILTON H	BOONE	026
PEARMAN, CARL C	BOONE	026
PEARSE, ROY W	WEST CENTRAL	214
PECORARO, ANTHONY P	JACKSON	098
PEDEN, BURNET W	ST. LOUIS METROP.	190
PEDEN, JAMES C	ST. LOUIS METROP.	190
PEDEN, JOS C	ST. LOUIS METROP.	190
PEDEN, JOS C	ST. LOUIS METROP.	190
PEEBLES, JONATHAN B	ST. LOUIS METROP.	190
PEETE, DON C	JACKSON	098
PELEGRIN, ROBERT J	JACKSON	098
PELICAN, GEORGE	ST. LOUIS METROP.	190
PELZ, MORT D	ST. LOUIS METROP.	190
PEMBERTON, LOARN B	JACKSON	098
PENCE, FRANCIS W	JASPER	102
PENDELL, PAUL W	MID-MISSOURI	182
PENILLA, ANTONIO R	ST. LOUIS METROP.	190
PENNER, STANLEY	JACKSON	098
PENNINGER, WILLIAM H	GREENE COUNTY	082
PENNINGTON, D G	ST. LOUIS METROP.	190
PENNINGTON, FRANCIS E	ST. LOUIS METROP.	190
PENNOYER, JAMES	ST. LOUIS METROP.	190
PEPPER, EDWARD G	ST. LOUIS METROP.	190
PEPPER, MAX P	ST. LOUIS METROP.	190
PEREZ, ADAMOR R	ST. LOUIS METROP.	190
PEREZ, BLANCA M	ST. LOUIS METROP.	190
PEREZ, CARLOS A	ST. LOUIS METROP.	190
PEREZ-MESA, CARLOS M	BOONE	026
PERICO, CARLOS J	JACKSON	098
PERKINS, DAVID E	ST. LOUIS METROP.	190
PERKOFF, GERALD T	ST. LOUIS METROP.	190
PERLL, MAURICE F	JACKSON	098
PERLL, RITA D	JACKSON	098
PERNA, VINCENT P	ST. CHARLES-LINCOLN	126
PERNOUD, FLAVIUS G	ST. LOUIS METROP.	190
PERNOUD, FLAVIUS G	ST. LOUIS METROP.	190
PERNOUD, JOAN M	ST. LOUIS METROP.	190
PERNOUD, MICHAEL F	ST. LOUIS METROP.	190
PERRY, HORACE M	ST. LOUIS METROP.	190
PERRY, MICHAEL C	BOONE	026
PERRY, WM D	ST. LOUIS METROP.	190
PESKIN, EDWARD G	ST. LOUIS METROP.	190
PETERSEN, EUGENE G	JACKSON	098
PETERSEN, HAROLD E	BUCHANAN	030
PETERSON, BONITA J	JACKSON	098
PETERSON, CARL M	JACKSON	098
PETERSON, CHAS R	BOONE	026
PETERSON, DONALD B	CALLAWAY	038
PETERSON, FREDERICK D	ST. LOUIS METROP.	190
PETERSON, GARY J	ST. LOUIS METROP.	190
PETERSON, JAY T	JACKSON	098
PETERSON, STANLEY S	GREENE COUNTY	082
PETERSON, WALTER R	JACKSON	098
PETRUSKA, PAUL J	ST. LOUIS METROP.	190
PETRY, EZRA L	JACKSON	098
PFEFER, LELAND U	BOONE	026
PFEFFER, ROBT I	BUCHANAN	030
PFEFFER-HURWITZ, JUDITH	JACKSON	098
PFEFFERKORN, DAVID A	SEMO	202
PFEIFER, OLIVER C	ST. LOUIS METROP.	190
PFEIFFER, RALPH B	GREENE COUNTY	082
PHILIP, VARKEY	ST. LOUIS METROP.	190
PHILLIPS, ABRAHAM M	ST. LOUIS METROP.	190
PHILLIPS, HANFORD	ST. LOUIS METROP.	190
PHILLIPS, JOHN J	ST. LOUIS METROP.	190
PHILLIPS, THOMAS P	JACKSON	098
PHILLIPS, WM J	ST. LOUIS METROP.	190
PHILPOTT, GORDON W	ST. LOUIS METROP.	190
PHIPATANAKUL, C S	ST. LOUIS METROP.	190
PHIPATANAKUL, SUPOTE	ST. LOUIS METROP.	190
PICCIONE, LEONARD N	ST. LOUIS METROP.	190
PICHARDO, JAVIER A	MINERAL AREA	138
PICKARD, CLARENCE M	BOONE	026
PICKARD, NICHOLAS S	JACKSON	098
PICKENS, JAMES M	BOONE	026
PICKERING, LEE I	JACKSON	098
PIEBENGA, LARRY W	JACKSON	098
PIEDRA, H E	BARTON	018
PIEPERGERDES, LARRY G	JACKSON	098
PIFER, LAWRENCE H	BUCHANAN	030
PIKER, KENNETH D	GREENE COUNTY	082
PILEGGI, FELIX A	CLAY	050
PILEPICH, MILIENKO V	ST. LOUIS METROP.	190
PILLA, LAWRENCE A	ST. LOUIS METROP.	190
PIMENTEL, ESPERANZA M	ST. LOUIS METROP.	190
PIMENTEL, MAURICIO F	ST. LOUIS METROP.	190
PINCKLEY, JAMES N	GREENE COUNTY	082
PINEDA, HECTOR O	ST. LOUIS METROP.	190
PINGELTON, WM B	BOONE	026
PINGLETON, SUSAN K	JACKSON	098
PINGLETON, WILLIAM W	CLAY	050
PINKERTON, JOS A	JACKSON	098
PINKSTAFF, THOS H	SEMO	202
PINSKER, OSCAR T	JACKSON	098
PIPER, AUGUST T	ST. LOUIS METROP.	190
PIPER, DONALD K	JACKSON	098
PIPKIN, GARRETT	JACKSON	098
PITIYANUVATH, TASANAPORN	JACKSON	098
PITNEY, PHILLIP W	PIKE	186
PITSINGER, NOLAN B	ST. LOUIS METROP.	190
PITTMAN, GERALD R	ST. LOUIS METROP.	190
PITTMAN, SUSAN	ST. LOUIS METROP.	190
PIZZIMBONO, CARLOS A	ST. LOUIS METROP.	190
PLACE, KENNETH C	JACKSON	098
PLATZ, JOHN H	GRAND RIVER	078
PLAX, STEVEN I	ST. LOUIS METROP.	190

PLOWMAN, EDWARD M	M-R-S	130
PLUMPE, WM T	ST. LOUIS METROP.	190
PLUNKETT, LITTLETON J	B-W-R-C	034
PODRECCA, GUIDO I	GREENE COUNTY	082
POGGEMEIER, WM H	ST. CHARLES-LINCOLN	126
POJANASOMBOON, PICHAT	MID-MISSOURI	182
POLITI, GREGORY B	JACKSON	098
POLITTE, LENARD L	BOONE	026
POLLAK, ERICH W	JACKSON	098
POLLOCK, LEO H	JACKSON	098
PONCE, ARMANDO B	CALLAWAY	038
PONTILLAS, JOB B	PERRY-STE. GENEVIEVE	174
POONAWALA, HUSENI E	JACKSON	098
POOR, CARL W	JASPER	102
POPP, CARL G	SEMO	202
PORPORIS, ARTHUR A	ST. LOUIS METROP.	190
PORTER, LOUIS	JACKSON	098
PORTER, MICHAEL J	JACKSON	098
PORTUGAL, ANTONIO Q	ST. LOUIS METROP.	190
PORTUONDO, BONAVENTURE C	ST. LOUIS METROP.	190
POST, JOHN P	F-G-W	074
POST, LAWRENCE T	ST. LOUIS METROP.	190
POST, STEPHEN L	ST. LOUIS METROP.	190
POSTMA, GEORGE S	JACKSON	098
POTASHNICK, ROBT	ST. LOUIS METROP.	190
POTTENGER, LOWELL K	JASPER	102
POTTER, CARYL A	BUCHANAN	030
POTTER, REESE H	ST. LOUIS METROP.	190
POTTS, DAN E	ST. LOUIS METROP.	190
POTTS, DONALD A	JACKSON	098
POWELL, ALAN E	JACKSON	098
POWELL, CHARLES B	ST. LOUIS METROP.	190
POWELL, EARL A	ST. LOUIS METROP.	190
POWELL, EDWIN M	GREENE COUNTY	082
POWELL, JOHN A	ST. LOUIS METROP.	190
POWELL, NELSON E	JACKSON	098
POWELL, ROBT G	JASPER	102
POWERS, PIERCE W	ST. LOUIS METROP.	190
PRATER, BILL G	GREENE COUNTY	082
PRATHER, WILLIAM R	CLAY	050
PRENSKY, ARTHUR L	ST. LOUIS METROP.	190
PRESANT, CARY A	ST. LOUIS METROP.	190
PRESNELL, CLEITUS A	ST. LOUIS METROP.	190
PREVITI, VINCENT	GREENE COUNTY	082
PRICE, KENNETH C	ST. LOUIS METROP.	190
PRINTZ, JOS H	JACKSON	098
PRINTZ, OTTO J	JACKSON	098
PROBST, RAYMOND E	ST. LOUIS METROP.	190
PROBSTEIN, JACOB G	ST. LOUIS METROP.	190
PROCTOR, DONALD C	PETTIS	178
PROKOP, JOS R	BUCHANAN	030
PROPHETE, BEAUMANOIR	ST. LOUIS METROP.	190
PROSKEY, VINCENT J	ST. LOUIS METROP.	190
PROSTIC, EDWARD J	JACKSON	098
PRUETT, BURCHARD S	ST. LOUIS METROP.	190
PRUETT, DON S	ST. LOUIS METROP.	190
PRUETT, HUBERT S	ST. LOUIS METROP.	190
PRUETT, PAUL L	GREENE COUNTY	082
PRUSACZYK, JOS V	ST. LOUIS METROP.	190
PRYOR, HAROLD J	JACKSON	098
PRYOR, IRA J	JASPER	102
PU, PIN H	DUNKLIN	070
PUCCI, GREGORY L	JACKSON	098
PUCKETT, CHAS L	BOONE	026
PUGH, RICHARD G	JACKSON	098
PULLIAM, MORRIS W	BOONE	026
PURCELL, HARRY K	ST. LOUIS METROP.	190
PURCELL, JOHN	ST. LOUIS METROP.	190
PURCELL, PAUL W	CLAY	050
PYNE, HERBERT S	ST. LOUIS METROP.	190

Q

QUADIR, HUMAYUM	ST. LOUIS METROP.	190
QUAYLE, WILLIAM H	BOONE	026
QUER, ERICH A	JACKSON	098
QUICK, RICHARD T	ST. LOUIS METROP.	190
QUINN, PAUL S	GREENE COUNTY	082
QURESHI, ABDUL R	ST. LOUIS METROP.	190

R

RABORAR, ARTESO C	GREENE COUNTY	082
RACADIO, SEVERO M	ST. LOUIS METROP.	190
RACHLIN, MAXWELL	ST. LOUIS METROP.	190
RADER, ADA E	JACKSON	098
RADER, EDWARD S	ST. LOUIS METROP.	190
RADER, GEO B	ST. LOUIS METROP.	190
RADKE, JOHN D	ST. LOUIS METROP.	190
RAGLAND, JERRY J	JOHNSON	110
RAGLAND, JOHN E	COLE	058
RAHMAN, MOHAMMED H	ST. CHARLES-LINCOLN	126
RAHMAN, MOUDUDUR	ST. LOUIS METROP.	190
RAICH, ROBT A	JACKSON	098
RAICHLE, MARCUS E	ST. LOUIS METROP.	190
RAINEY, ROBT	ST. LOUIS METROP.	190
RAINWATER, ELMER H	GREENE COUNTY	082
RAJA-SEKHAR, RUDRAIAH	ST. LOUIS METROP.	190
RAKSAKULTHAI, VINAI	MINERAL AREA	138
RALL, KENNETH L	BOONE	026
RAMAMOHANARAO, A	MINERAL AREA	138
RAMEY, EHRET O	JACKSON	098
RAMIREZ, RICARDO M	B-W-R-C	034
RAMIREZ, SAML G	ST. LOUIS METROP.	190
RAMOS, AMERICO G	JACKSON	098
RAMOS, ROCHE P	JACKSON	098
RAMSEY, ROBT H	ST. LOUIS METROP.	190
RANDOLPH, BERNARD C	ST. LOUIS METROP.	190
RANKIN, DIANE	ST. LOUIS METROP.	190
RANNIE, PAUL R	JACKSON	098
RAO, ASWATH N	ST. LOUIS METROP.	190
RAO, CARLO	ST. LOUIS METROP.	190
RAO, S N	ST. LOUIS METROP.	190
RAPHEL, JOSE	BUCHANAN	030
RAPP, EARL L	M-R-S	13
RAPP, HAROLD B	CAPE GIRARDEAU	04
RAPPOLD, OTTO H	ST. LOUIS METROP.	19
RASHID, PARVEEN	SOUTH CENTRAL	20
RASMUSSEN, MICHAEL A	CLAY	05
RATCHESON, ROBT A	ST. LOUIS METROP.	19
RATKIN, GARY A	ST. LOUIS METROP.	19
RAU, JEROLD	JACKSON	09
RAUKTIS, ROBERT F	JACKSON	09
RAVIS, MARK S	JACKSON	09
RAWLINS, FRED E	CAPE GIRARDEAU	04
RAWSON, PERRY G	F-G-W	07
RAY, DAVID J	JASPER	10
RAY, JEAN L	ST. LOUIS METROP.	19
RAYBUCK, HARRY E	ST. LOUIS METROP.	19
RAYNOR, RICHARD C	SALINE	19
REA, JAMES L	COLE	05
REARDON, THOS F	ST. LOUIS METROP.	19
RECANO, RICARDO Q	ST. LOUIS METROP.	19
RECTOR, JOE L	JACKSON	09
REDDI, RAGHUNATH	ST. LOUIS METROP.	19
REDDIN, JACK L	JACKSON	09
REDDIN, PATRICK C	AUDRAIN	01
REDDY, ABBIAH N	B-W-R-C	03
REDDY, M V	ST. LOUIS METROP.	19
REDDY, SARVOTHAM K	B-W-R-C	03
REDINGTON, JAMES C	ST. LOUIS METROP.	19
REDMOND, WM S	BUCHANAN	03
REED, GLEN H	WEST CENTRAL	21
REED, JOHNATHAN R	ST. LOUIS METROP.	19
REED, LESLIE G	ST. LOUIS METROP.	19
REED, MARTHA A	JEFFERSON	10
REED, WM A	JACKSON	09
REEDER, CHAS C	CLAY	05
REESE, ALMA V	ST. LOUIS METROP.	19
REESE, LESTER T	ST. LOUIS METROP.	19
REEVES, GLEN I	ST. LOUIS METROP.	19
REGIER, CARL M	OZARKS	166
REH, THOS E	ST. LOUIS METROP.	190
REHM, RALPH D	SEMO	202
REICH, HARRY A	ST. LOUIS METROP.	190
REICHERT, TIMOTHY J	ST. LOUIS METROP.	190
REICHERT-PASZKIEWICZ, M	ST. LOUIS METROP.	190
REID, JAMES A	SALINE	198
REIDER, RICHARD A	ST. LOUIS METROP.	190
REINECK, JOHN A	ST. LOUIS METROP.	190
REINHARD, EDWARD H	ST. LOUIS METROP.	190
REINHARDT, G R	JACKSON	098
REISA, RONALD C	ST. CHARLES-LINCOLN	126
REISLER, DAVID M	ST. LOUIS METROP.	190
REISS, JEANNE E	JACKSON	098
REISTER, DOROTHY D	JACKSON	098
REISTER, PHILIP D	JACKSON	098
REITER, FEDERICO B	ST. LOUIS METROP.	190
REITMAN, STANLEY	ST. LOUIS METROP.	190

REJENT, ANTHONY J	ST. LOUIS METROP.	190
REMKUS, JAMES E	JACKSON	098
RENDLEMAN, DAVID D	ST. LOUIS METROP.	190
RENDLEMAN, GEO F	ST. LOUIS METROP.	190
RENDLEMAN, GEO F	ST. LOUIS METROP.	190
RENGACHARY, DHANALAKSHMI	JACKSON	098
RENNARD, MARVIN	ST. LOUIS METROP.	190
REPP, THEOOORE J	ST. LOUIS METROP.	190
REUTER, LOUIS A	ST. LOUIS METROP.	190
REVARE, PAUL	CLAY	050
REVELEY, MICHAEL A	ST. LOUIS METROP.	190
REYES, JOSE T	ST. LOUIS METROP.	190
REYES, LUIS A	ST. LOUIS METROP.	190
REYES, ROSENDO A	ST. LOUIS METROP.	190
REYNOLDS, CLARENCE C	JACKSON	098
REYNOLDS, FREDERICK C	ST. LOUIS METROP.	190
REYNOLDS, JAMES A	ST. LOUIS METROP.	190
REYNOLDS, JAMES D	JACKSON	098
REYNOLDS, JAMES O	8OONE	026
REYNOLDS, M W	JOHNSON	110
RHEE, DONG S	ST. LOUIS METROP.	190
RHEE, SEOUNG E	ST. LOUIS METROP.	190
RHODES, ANDREW J	JACKSON	098
RHODES, PHILIP G	JACKSON	098
RIBAUDO, J M	ST. LOUIS METROP.	190
RICCI, WALTER F	JACKSON	098
RICE, BERNARD F	JACKSON	098
RICHARDS, FRANK O	ST. LOUIS METROP.	190
RICHAROSON, GEO A	F-G-W	074
RICHARDSON, MARION W	JACKSON	098
RICHARDSON, THOS F	ST. LOUIS METROP.	190
RICHARDSON, WM R	F-G-W	074
RICHERT, ROBT C	JACKSON	098
RICHMAN, ELMER	ST. LOUIS METROP.	190
RICHMOND, MICHAEL R	ST. LOUIS METROP.	190
RIDENHOUR, CLARENCE E	BOONE	026
RIDGEWAY, WM G	ST. LOUIS METROP.	190
RIDINGS, G R	CAPE GIRARDEAU	042
RIDINGS, HAROLD D	CAPE GIRARDEAU	042
RIEKHOF, PAUL L	JACKSON	098
RIES, DOUGLAS A	ST. LOUIS METROP.	190
RIESENBERG, OONALD E	GREENE COUNTY	082
RIGGIO, SALVATORE N	ST. LOUIS METROP.	190
RIKLI, ARTHUR E	BOONE	026
RILEY, CHAS T	LAFAYETTE-RAY	118
RILEY, J P	JACKSON	098
RILEY, JOHN J	ST. LOUIS METROP.	190
RILLER, LOWELL E	JACKSON	098
RINCK, EDWARO C	WEST CENTRAL	214
RING, EDWARD M	ST. LOUIS METROP.	190
RINGER, CARL N	CAPE GIRARDEAU	042
RINK, RICHARD A	BOONE	026
RIPPEY, JOHN H	JACKSON	098
RISING, OEAN R	GREENE COUNTY	082
RITCHIE, FRANCES R	ST. LOUIS METROP.	190
RITTER, C J	CAPE GIRARDEAU	042
RITTER, CARL F	CAPE GIRAROEAU	042
RITTER, HUBERT A	ST. LOUIS METROP.	190
RITTER, PAUL J	ST. LOUIS METROP.	190
RITTER, RAY A	CAPE GIRAROEAU	042
RITTER, RAYMOND A	CAPE GIRAROEAU	042
RITTER, WILLIAM S	JACKSON	098
RITTERBUSCH, JAMES K	CALLAWAY	038
RIVERA, MICHELE K	JACKSON	098
RIZZO, ADOLFO E	ST. LOUIS METROP.	190
ROARK, PAUL M	ST. LOUIS METROP.	190
RO8B, CHRISTINE A	JACKSON	098
ROB8EN, GEORGE G	ST. LOUIS METROP.	190
ROBBINS, PHILIP	ST. LOUIS METROP.	190
ROBERTS, FRED F	JACKSON	098
ROBERTS, GROSVENOR G	JACKSON	098
ROBERTS, HAROLD K	ST. LOUIS METROP.	190
ROBERTS, HAROLD M	JACKSON	098
ROBERTS, HOWARD H	JASPER	102
ROBERTS, JOHN P	ST. LOUIS METROP.	190
RO8ERTS, PAUL A	PETTIS	178
ROBERTS, PERRY T	CAPE GIRARDEAU	042
ROBERTS, PHYLLIS L	BUCHANAN	030
ROBERTSON, FRANK G	ST. LOUIS METROP.	190
ROBERTSON, WM D	B-W-R-C	034
ROBINETT, WADE V	JACKSON	098
ROBINSON, ARTHUR W	JACKSON	098
ROBINSON, EDITH C	ST. LOUIS METROP.	190
ROBINSON, ERNEST K	JACKSON	098
ROBINSON, GARY L	GREENE COUNTY	082
ROBINSON, GEO G	D-H-P-D	066
ROBINSON, RONALO L	CAPE GIRARDEAU	042
RO8INSON, VAN M	CLAY	050
ROBINSON, WM J	JACKSON	098
ROBLEE, MELVIN A	ST. LOUIS METROP.	190
ROBLES, LUIS H	JACKSON	098
ROCHE, MAURICE B	ST. LOUIS METROP.	190
ROCKWELL, WAYNE L	CLAY	050
RODEN, VERNON J	ST. LOUIS METROP.	190
RODES, NED D	AUDRAIN	014
RODGERS, ELRIE P	BOONE	026
RODGERS, GEO H	JACKSON	098
RODGERS, SAML U	JACKSON	098
RODRIGO, BERNARDO R	ST. LOUIS METROP.	190
RODRIGUEZ, FABIO	ST. LOUIS METROP.	190
RODRIGUEZ, GREGORIO L	SEMO	202
RODRIGUEZ, UBALDO R	ST. LOUIS METROP.	190
ROEHRS, MARVIN E	SALINE	198
ROFAIL, AMIN A	JACKSON	098
ROGERS, HUNTER B	ST. LOUIS METROP.	190
ROGERS, JOHN T	8UCHANAN	030
ROGERS, ROBT L	JACKSON	098
ROGERS, WALLACE A	BOONE	026
ROLLER, JAMES A	M-R-S	130
ROLLER, MERRILL J	M-R-S	130
*ROMITO, ANTHONY J	JACKSON	098
RONGEY, KENNETH A	ST. LOUIS METROP.	190
ROOS, AL8ERT	ST. LOUIS METROP.	190
ROPE, OOUGLAS M	JACKSON	098
ROPER, CHAS L	ST. LOUIS METROP.	190
ROPER, STANLEY O	OZARKS	166
ROSE, JOHN F	GRAND RIVER	078
ROSECAN, MARVIN	ST. LOUIS METROP.	190
*ROSELL, LOUIS V	ST. LOUIS METROP.	190
ROSENBAUM, HARRY D	ST. LOUIS METROP.	190
ROSENBAUM, HERBERT E	ST. LOUIS METROP.	190
ROSENBERG, OAVID S	ST. LOUIS METROP.	190
ROSENBERG, ISAC	JACKSON	098
ROSENFELD, HENRY	ST. LOUIS METROP.	190
ROSENHOLTZ, MITCHELL J	BOONE	026
ROSENSTEIN, DANL L	SEMO	202
ROSENTHAL, IRWIN I	BUCHANAN	030
ROSENTHAL, RANDALL	ST. LOUIS METROP.	190
ROSKIND, JOEL	ST. LOUIS METROP.	190
ROSS, DENNIS L	ST. LOUIS METROP.	190
ROSS, GILBERT	BOONE	026
ROSS, ROBERT M	JACKSON	098
ROSS, WALTER R	CLAY	050
ROSS, WM J	ST. LOUIS METROP.	190
ROTER, ALEXANDER M	ST. CHARLES-LINCOLN	126
ROTH, ALFRED D	JACKSON	098
ROTH, JOHN J	ST. LOUIS METROP.	190
ROTHER, PAUL H	ST. CHARLES-LINCOLN	126
ROTHMAN, OAVID	ST. LOUIS METROP.	190
ROTHWEILER, ROBT J	ST. LOUIS METROP.	190
ROTSKOFF, KENNETH S	ST. LOUIS METROP.	190
ROULHAC, GEO E	ST. LOUIS METROP.	190
ROUSE, ERNEST T	ST. LOUIS METROP.	190
ROUSE, ERNEST T	ST. LOUIS METROP.	190
ROUSH, GEO	ST. LOUIS METROP.	190
ROXAS, GENEROSO P	ST. CHARLES-LINCOLN	126
ROY, JOS A	ST. LOUIS METROP.	190
ROYCE, JAMES J	JASPER	102
ROYCE, ROBT K	ST. LOUIS METROP.	190
ROYER, JERRY A	BOONE	026
ROYSE, ROY P	F-G-W	074
ROYSTON, GRANDISON D	ST. LOUIS METROP.	190
ROZEN, JAY I	JACKSON	098
RUBENSTEIN, MELVIN	ST. LOUIS METROP.	190
RUBIN, HARVEY P	JACKSON	098
RUBIN, ROBT	ST. LOUIS METROP.	190
RUBNITZ, LEON H	JACKSON	098
RUDI, HERBERT J	ST. LOUIS METROP.	190
RUEHL, ALBERT F	ST. LOUIS METROP.	190
RUES, LAWRENCE A	JACKSON	098
RUFE, JOHN R	JACKSON	098
RUFF, PAUL G	GREENE COUNTY	082
RUFF, T E	B-W-R-C	034
RUGGLES, JAMES G	ST. CHARLES-LINCOLN	126

---

* Doctor of Osteopathy

RUHLING, RUDY	ST. LOUIS METROP.	190
RUMELT, MICHAEL	ST. LOUIS METROP.	190
RUNEZ, MANUEL W	SOUTH CENTRAL	206
RUSAN, THOS E	ST. LOUIS METROP.	190
RUSSELL, BARBARA E	MID-MISSOURI	182
RUSSELL, EARL D	GREENE COUNTY	082
RUSSELL, GARTH S	BOONE	026
RUSSELL, HERMAN E	ST. LOUIS METROP.	190
RUSSELL, JAMES L	JACKSON	098
RUSSELL, JOS P	COLE	058
RUSSELL, ROBT K	JACKSON	098
RUTHERFORD, BARRY D	JACKSON	098
RUTLEDGE, JOHN F	JEFFERSON	106
RUWITCH, JOSEPH	ST. LOUIS METROP.	190
RYAN, DAVID	GRAND RIVER	078
RYAN, JOHN B	F-G-W	074
RYAN, JOHN H	BUCHANAN	030
RYAN, JOHN J	ST. LOUIS METROP.	190
RYAN, MICHAEL E	JACKSON	098
RYAN, ROBERT A	GREENE COUNTY	082
RYAN, ROBERT E	ST. LOUIS METROP.	190
RYAN, ROBT E	ST. LOUIS METROP.	190
RYAN, THOMAS J	COLE	058

S

SAAB, SALIM B	BOONE	026
SABAPATHY, SHANMUGASUNDARA	JASPER	102
SABATES, FELIX N	JACKSON	098
SACHAR, LEO A	ST. LOUIS METROP.	190
SAFDAR, SHABBIR H	ST. LOUIS METROP.	190
SAFERSTEIN, A L	JACKSON	098
SAFLEY, THOS J	JACKSON	098
SAGHIR, MARCEL T	ST. LOUIS METROP.	190
SAGO, ALVIN L	CAPE GIRARDEAU	042
SAHA, NITAI C	ST. LOUIS METROP.	190
SAHA, SUDHA R	ST. LOUIS METROP.	190
SAIFEE, SALMA	ST. LOUIS METROP.	190
SAKAMOTO, DAN K	ST. LOUIS METROP.	190
SALADINO, ANTHONY	JACKSON	098
SALANGA, PERCIVAL B	ST. LOUIS METROP.	190
SALDANA, DAHLIA	JACKSON	098
SALE, LLEWELLYN	ST. LOUIS METROP.	190
SALINAS, MARIO	ST. LOUIS METROP.	190
SALMON, MICKEY L	ST. LOUIS METROP.	190
SAMET, JOHN M	ST. LOUIS METROP.	190
SAMMON, THOS J	GREENE COUNTY	082
SAMMONS, HARRY C	ST. LOUIS METROP.	190
SAMUDRALA, RAMULU	ST. LOUIS METROP.	190
SAMUELSON, EDWARD A	JACKSON	098
SANCHEZ, ABELARDO B	ST. LOUIS METROP.	190
SANDER, PAUL D	BOONE	026
SANDERS, DONALD C	JACKSON	098
SANDERS, GEO E	CLAY	050
SANDERS, HARMON U	JACKSON	098
SANDERS, HAROLD L	BOONE	026
SANDERS, JACK S	COLE	058
SANDERS, THEODORE E	ST. LOUIS METROP.	190
SANDERS, WM F	JACKSON	098
SANDOCK, KENNETH	BOONE	026
SANDOW, THEODORE L	JACKSON	098
SANOZA, JOSEPH G	ST. LOUIS METROP.	190
SANEMAN, PAUL P	JASPER	102
SANTANELLO, WILLIAM M	ST. LOUIS METROP.	190
SANTILLANO, ANTONIO B	ST. LOUIS METROP.	190
SANTORO, CARLOS G	JACKSON	098
SANTOS-PARDO, LOURDES	ST. LOUIS METROP.	190
SAPALA, JOSEPH C	ST. LOUIS METROP.	190
SARGENT, ALDEN P	SEMO	202
SARGENT, JOHN P	SEMO	202
SASSER, WM F	ST. LOUIS METROP.	190
SATA, LINDBERGH S	ST. LOUIS METROP.	190
SATO, GEO	ST. LOUIS METROP.	190
SATYAM, DASA S	ST. LOUIS METROP.	190
SAUER, DONALD C	ST. LOUIS METROP.	190
SAUER, GORDON C	JACKSON	098
SAUER, PAUL E	GREENE COUNTY	082
SAUER, W N	ST. LOUIS METROP.	190
SAUNDERS, CAROL S	MID-MISSOURI	182
SAUNDERS, JOHN A	MID-MISSOURI	182
SAUVAGE, JACQUES P	ST. LOUIS METROP.	190
SAVCI, DOGAN H	ST. LOUIS METROP.	190
SAWYER, FLOYD E	CLAY	050
SAWYER, JAMES	ST. LOUIS METROP.	190
SCANLON, ROBT C	GREENE COUNTY	082
SCARATO, GARRY R	ST. LOUIS METROP.	190
SCHAAN, ROBT C	ST. LOUIS METROP.	190
SCHAEFER, BARRETT A	ST. LOUIS METROP.	190
SCHAEFER, GLENNON S	ST. LOUIS METROP.	190
SCHAEFFER, EDWARD M	GREENE COUNTY	082
SCHAERER, JACQUES P	ST. LOUIS METROP.	190
SCHAERRER, WM C	JACKSON	098
SCHAPER, ERNEST H	ST. LOUIS METROP.	190
SCHARF, DANIEL	JACKSON	098
SCHECHTER, SAML E	ST. LOUIS METROP.	190
SCHEELE, PAUL M	ST. LOUIS METROP.	190
SCHEER, GEORGE E	ST. LOUIS METROP.	190
SCHEFF, HAROLD	ST. LOUIS METROP.	190
SCHEIBE, ROBT G	ST. LOUIS METROP.	190
SCHEIBLE, ROBERT F	ST. LOUIS METROP.	190
SCHENGBER, JOHN S	ST. LOUIS METROP.	190
SCHERR, DAVID D	COLE	058
SCHERTZ, TRUMAN B	CLAY	050
SCHEWE, ELMER J	BOONE	026
SCHIERMAN, WM D	ST. LOUIS METROP.	190
SCHIFFMACHER, JACK E	JACKSON	098
SCHILLIE, GENE A	JACKSON	098
SCHLANSKY, SEYMOUR M	ST. LOUIS METROP.	190
SCHLOZMAN, DANL L	JACKSON	098
SCHLUER, ELMER P	ST. LOUIS METROP.	190
SCHMIDT, C R	ST. LOUIS METROP.	190
SCHMIDT, CHAS A	F-G-W	074
SCHMIDT, DENNIS A	ST. LOUIS METROP.	190
SCHMIDT, EDMUND M	ST. LOUIS METROP.	190
SCHMIDT, EDWIN H	ST. LOUIS METROP.	190
SCHMIDT, EDWIN H	ST. LOUIS METROP.	190
SCHMIDT, HERBERT J	JASPER	102
SCHMIDT, JEROME H	COLE	058
SCHMIEMEIER, ROY H	ST. LOUIS METROP.	190
SCHNARR, WILLIAM	GREENE COUNTY	082
SCHNEIDER, SALLY L	ST. LOUIS METROP.	190
SCHNEIDER, SAM	ST. LOUIS METROP.	190
SCHNEIDER, THOS A	ST. CHARLES-LINCOLN	126
SCHOEBERL, CLETUS B	JASPER	102
SCHOECK, ALBERT F	ST. LOUIS METROP.	190
SCHOEDINGER, GEORGE R	ST. LOUIS METROP.	190
SCHOENECKER, PERRY L	ST. LOUIS METROP.	190
SCHOENTAG, JOHN S	ST. LOUIS METROP.	190
SCHOKKER, JOHANNES	COLE	058
SCHONFELD, GUSTAV	ST. LOUIS METROP.	190
SCHOOLMAN, ARNOLD	JACKSON	098
SCHOPP, ALVIN C	ST. LOUIS METROP.	190
SCHOTTMAN, GERHARD W	JACKSON	098
SCHRAGE, JON P	BOONE	026
SCHRANCK, CHAS R	ST. LOUIS METROP.	190
SCHREIBER, DAVID J	ST. LOUIS METROP.	190
SCHREIBER, NORMAN J	GREENE COUNTY	082
SCHROFF, CARLE H	GREENE COUNTY	082
SCHUESSLER, WOLFGANG P	ST. LOUIS METROP.	190
SCHUETZ, ALFRED	ST. CHARLES-LINCOLN	126
SCHULMAN, JEFFREY	ST. LOUIS METROP.	190
SCHULTE, GREGORY A	JASPER	102
SCHULTZ, EARL R	ST. LOUIS METROP.	190
SCHULTZ, GEORG C	CAPE GIRARDEAU	042
SCHULTZ, IRWIN	ST. LOUIS METROP.	190
SCHULTZ, SAML	ST. LOUIS METROP.	190
SCHULZ, RICHARD	ST. LOUIS METROP.	190
SCHUMAN, NORVIN D	JACKSON	098
SCHUTZ, CARL H	JACKSON	098
SCHUTZ, JOHN P	CLAY	050
SCHUTZ, RICHARD B	JACKSON	098
SCHWARTZ, EUGENE J	GREENE COUNTY	087
SCHWARTZ, HENRY G	ST. LOUIS METROP.	190
SCHWARTZ, HOWARD	ST. LOUIS METROP.	190
SCHWARTZ, MELVIN M	ST. LOUIS METROP.	190
SCHWARTZMAN, BERNARD	ST. LOUIS METROP.	190
SCHWARZ, LUIS H	ST. LOUIS METROP.	190
SCHWEGLER, ROBERT G	JACKSON	098
SCHWEISS, JOHN F	ST. LOUIS METROP.	190
SCIORTINO, JOHN S	ST. LOUIS METROP.	190
SCOPELITE, JOS A	ST. LOUIS METROP.	190
SCORSE, SIDNEY W	JASPER	102
SCOTT, EARL D	COLE	058
SCOTT, ELWIN P	ST. LOUIS METROP.	190
SCOTT, HORACE W	ST. LOUIS METROP.	190
SCOTT, JOHN E	JACKSON	098
SCOTT, KENNETH F	HENRY COUNTY	086

EABAUGH, L R	CAPE GIRARDEAU	042
EABAUGH, OTTIS D	ST. LOUIS METROP.	190
EABAUGH, WM O	CAPE GIRARDEAU	042
EE, WM B	BOONE	026
EED, JOHN	ST. LOUIS METROP.	190
EELEY, JAMES J	ST. LOUIS METROP.	190
EELY, CLARK W	JACKSON	098
EEVERS, RUTH	WEST CENTRAL	214
EIB, GEO A	ST. LOUIS METROP.	190
EIDEN, GERALD D	JACKSON	098
EITZ, ELSON F	JACKSON	098
ELLS, KENNETH J	JACKSON	098
ELVADURAI, PAUL N	ST. LOUIS METROP.	190
ENNOTT, JOHN S	COLE	058
ENTURIA, BEN H	ST. LOUIS METROP.	190
ENTURIA, HYMAN R	ST. LOUIS METROP.	190
ERMCHIEF, CHAIYARAT	MINERAL AREA	138
ERTL, GEORGE O	ST. LOUIS METROP.	190
ERTL, JAMES F	ST. LOUIS METROP.	190
ERTL, JOHN D	ST. LOUIS METROP.	190
ESHUMURTY, PONNURU	JACKSON	098
ESHUMURTY, VIMALA	JACKSON	098
ESSIONS, DONALD G	ST. LOUIS METROP.	190
ETHABUTRA, CHAISIRI	ST. LOUIS METROP.	190
ETHABUTRA, YOLVILAI	ST. LOUIS METROP.	190
EVASTIANOS, ARISTIDES E	ST. LOUIS METROP.	190
EXTON, DANL L	ST. LOUIS METROP.	190
EXTON, ELMER E	ST. LOUIS METROP.	190
HACKTER, BRUCE I	GREENE COUNTY	082
HAEFFER, JAMES T	GREENE COUNTY	082
HAH, ANWAR	ST. LOUIS METROP.	19D
HAH, BHARAT K	ST. LOUIS METROP.	190
HAH, HANSA J	ST. LOUIS METROP.	190
HAH, JITENDRA	ST: LOUIS METROP.	190
HAH, NAHEED F	ST. LOUIS METROP.	190
HAH, NARENDRA	BUCHANAN	030
HAHAN, PHILIP T	ST. LOUIS METROP.	190
HAHEEN, ELEANOR	BOONE	026
HAIKUN, GERALD L	ST. LOUIS METROP.	190
HALEN, PHILIP R	BOONE	026
HALET, MALCOLM F	JACKSON	098
HALLEY, JACK E	JACKSON	098
HANAHAN, MARY P	JASPER	102
HANAHAN, PHILIP J	ST. LOUIS METROP.	190
HANE, RAMON A	GREENE COUNTY	082
HANER, THOS P	ST. LOUIS METROP.	190
HANK, NEIL A	JACKSON	098
HANK, ROBT E	ST. LOUIS METROP.	190
HANKER, STUART G	JACKSON	098
HAPERO, JAMES A	BOONE	026
HAPIRO, HERBERT N	ST. LOUIS METROP.	190
HAPIRO, LAZARE M	JACKSON	098
HAPLEIGH, JOHN B	ST. LOUIS METROP.	190
HARMA, JANARDANA N	JACKSON	098
SHARMA, VIDYA	JACKSON	098
SHARP, AUSTIN R	ST. LOUIS METROP.	190
SHATZ, BURTON A	ST. LOUIS METROP.	190
SHAW, EDWARD J	ST. LOUIS METROP.	190
SHAW, JAMES T	F-G-W	074
SHAW, RICHARD C	ST. LOUIS METROP.	190
SHAW, WM J	HOWARD	094
SHEA, JAMES G	F-G-W	074
SHEA, JOHN F	ST. LOUIS METROP.	190
SHEAHON, JOHN A	JACKSON	098
SHECHTER, NATHAN	JACKSON	098
SHEEHAN, MICHAEL B	JACKSON	098
SHEFFIELD, WM H	ST. LOUIS METROP.	190
SHELDEN, RUSSELL D	JACKSON	098
SHELL, WILLIAM C	SEMO	202
SHELTON, EARL W	ST. LOUIS METROP.	19D
SHELTON, EDWARD O	LAKE OF THE OZARKS	120
SHELTON, ROY W	GREENE COUNTY	082
SHEN, HANG C	ST. LOUIS METROP.	190
SHEN, JEROME T	ST. LOUIS METROP.	190
SHERIDAN, EDMUNO R	ST. LOUIS METROP.	190
SHERIDAN, JOHN J	ST. LOUIS METROP.	190
SHERMAN, DAVID	BOONE	026
SHERMAN, PHILIP A	LACLEDE	115
SHERMAN, WARREN G	ST. LOUIS METROP.	190
SHERWIN, CHAS S	ST. LOUIS METROP.	190
SHEVLIN, CHAS F	BUCHANAN	030
SHIEBER, WM	ST. LOUIS METROP.	190
SHIELDS, JOHN B	ST. LOUIS METROP.	190
SHIELDS, LAWRENCE S	GREENE COUNTY	082
SHIFRIN, ALEXANDER	JACKSON	098
SHIN, DONG-SOO	C-M-M-R	046
SHIREY, ARNOLD G	PEMISCOT	170
SHOBE, FRANK O	ST. LOUIS METROP.	190
SHOCKLEY, CLARENCE J	JACKSON	D98
SHOSS, MILTON	CAPE GIRARDEAU	042
SHRIVER, RONALD G	CAPE GIRARDEAU	042
SHUEY, HERBERT H	JACKSON	098
SHUFF, PAUL D	ST. LOUIS METROP.	190
SHUKLA, JYOTINDRA D	MID-MISSOURI	182
SHULL, G D	COLE	058
SHUMAN, JOS S	ST. LOUIS METROP.	190
SHYKEN, HERMAN	ST. LOUIS METROP.	190
SICAT, ALFONSO V	JOHNSON	110
SICAT, LUZVIMINDA F	JACKSON	098
SICELUFF, JOS G	GREENE COUNTY	082
SIDDIQUI, FARZANNA Q	ST. LOUIS METROP.	190
SIDDIQUI, JAWED H	ST. LOUIS METROP.	190
SIDDIQUI, M Y	ST. LOUIS METROP.	190
SIDES, STANLEY D	CAPE GIRARDEAU	042
SIEGEL, CARL D	JACKSON	098
SIEGFRIED, BARRY	ST. LOUIS METROP.	190
SIEMERS, GEO E	ST. LOUIS METROP.	190
SIESENER, HERBERT H	ST. LOUIS METROP.	190
SIGHTS, WARREN P	BOONE	026
SIGMUNO, CHAS A	ST. LOUIS METROP.	190
SIGNORELLI, ANOREW J	ST. LOUIS METROP.	190
SILBER, SHERMAN J	ST. LOUIS METROP.	190
*SILL, WILLIAM	ST. CHARLES-LINCOLN	126
SILLIMAN, YORK E	BUCHANAN	030
SILSBY, OON J	GREENE COUNTY	082
SILSBY, HARRY D	GREENE COUNTY	082
SILVA, VICTOR A	ST. LOUIS METROP.	190
SILVER, BERND	ST. LOUIS METROP.	190
SILVER, OONALD	BOONE	026
SILVERBERG, CHAS	ST. LOUIS METROP.	190
SILVERMINTZ, SAUL D	ST. LOUIS METROP.	190
SILVERS, ROBT G	BOONE	026
SIMMONS, DONALD D	JACKSON	098
SIMMONS, JESS S	JASPER	102
SIMMONS, JOHN L	JACKSON	098
SIMON, DAVID L	ST. LOUIS METROP.	190
SIMON, GRACITA S	CLAY	050
SIMON, JEROME I	ST. LOUIS METROP.	190
SIMON, NATHAN M	ST. LOUIS METROP.	190
SIMON, SANFORD	JACKSON	098
SIMONDS, JOHN F	BOONE	026
SIMONS, PAUL S	ST. LOUIS METROP.	190
SIMOWITZ, FREDRIC M	ST. LOUIS METROP.	190
SIMPELO, RUSTICO V	MINERAL AREA	138
SIMPSON, ALBERT P	GREENE COUNTY	082
SIMPSON, EMERSON L	GREENE COUNTY	082
SIMPSON, JOSEPH	ST. LOUIS METROP.	190
SIMRIL, WAYNE A	ST. LOUIS METROP.	190
SIMS, WM A	ST. LOUIS METROP.	190
SINASA, SURAT	DUNKLIN	070
SINCLAIR, RICHARD H	JACKSON	098
SINCOX, CHAS H	F-G-W	074
SINGER, PAUL R	ST. LOUIS METROP.	190
SINGHAL, GOKUL C	ST. LOUIS METROP.	190
SINGHAL, RENU	ST. LOUIS METROP.	190
SINGLETON, CHARLES M	JACKSON	098
SINGLETON, JOHN M	JACKSON	098
SINGLETON, MARVIN A	JASPER	1D2
SINSAKUL, VICHIEN	ST. LOUIS METROP.	190
SIRINTRAPUN, SEYVEE	JEFFERSON	1D6
SIRIPIPAT, PALLOP	AUDRAIN	014
SIRISUWANANGKURA, S	ST. LOUIS METROP.	190
SIRRIDGE, MARJORIE J	JACKSON	098
SIRRIDGE, WM T	JACKSON	098
SISK, CLARK	ST. LOUIS METROP.	190
SISK, JAMES C	ST. LOUIS METROP.	190
SISLEN, DONALD R	ST. LOUIS METROP.	190
SISLER, MAYNARD L	DUNKLIN	070
SISSON, RICHARD G	ST. LOUIS METROP.	190
SIU, KENNETH K	COLE	058
SKEFFINGTON, MARY J	ST. LOUIS METROP.	190
SKILLING, DAVID M	ST. LOUIS METROP.	190
SKILLMAN, ROBT K	JACKSON	098
SKIMMING, W L	ST. LOUIS METROP.	190

Doctor of Dsteopathy.

SKINNER, JOHN S	ST. LOUIS METROP.	190
SKINNER, JOHN T	JACKSON	098
SKLENAR, OONALD E	BUCHANAN	030
SLAHOREK, GEORGE J	MID-MISSOURI	182
SLANKARO, J E	JACKSON	098
SLAUGHTER, CARL R	CLAY	050
SLAVIN, RAYMOND G	ST. LOUIS METROP.	190
SLENTZ, EDWIN L	JACKSON	098
SLENTZ, WM A	JACKSON	098
SLETTEN, IVAN W	ST. LOUIS METROP.	190
SLICKMAN, ROBT A	JACKSON	098
SLIOM, CYRIL M	ST. LOUIS METROP.	190
SLY, WM S	ST. LOUIS METROP.	190
SMILEY, WM L	ST. LOUIS METROP.	190
SMIT, HERBERT M	ST. LOUIS METROP.	190
SMITH, ARTHUR B	JACKSON	098
SMITH, BENJ F	ST. LOUIS METROP.	190
SMITH, CARLIE B	GREENE COUNTY	082
*SMITH, CHAS H	CLAY	050
SMITH, CLAUDE F	SOUTH CENTRAL	206
SMITH, DERMOTT A	ST. LOUIS METROP.	190
SMITH, ELBERT E	JACKSON	098
SMITH, EMILY L	ST. LOUIS METROP.	190
SMITH, GARLAND F	ST. LOUIS METROP.	190
SMITH, HERBERT P	ST. LOUIS METROP.	190
SMITH, HUBERT E	JACKSON	098
SMITH, HUGH R	ST. LOUIS METROP.	190
SMITH, IRA T	JACKSON	098
SMITH, JAMES B	ST. LOUIS METROP.	190
SMITH, JAMES M	JACKSON	098
SMITH, JAMES O	HENRY COUNTY	086
SMITH, JASON N	BOONE	026
SMITH, JOE R	BOONE	026
SMITH, JOHN C	JACKSON	098
SMITH, JOHN E	ST. LOUIS METROP.	190
SMITH, KATHERINE A	JACKSON	098
SMITH, KATHLEEN	ST. LOUIS METROP.	190
SMITH, KENNETH R	ST. LOUIS METROP.	190
SMITH, KEVIN B	ST. LOUIS METROP.	190
SMITH, MORTON E	ST. LOUIS METROP.	190
SMITH, NORRIS W	ST. LOUIS METROP.	190
SMITH, OTHELLO D	JACKSON	098
SMITH, ROBT W	GRAND RIVER	078
SMITH, ROBT W	ST. LOUIS METROP.	190
SMITH, ROLAND T	JASPER	102
SMITH, ROLLIN H	SOUTH CENTRAL	206
SMITH, SIDNEY E	ST. LOUIS METROP.	190
SMITH, TED P	MID-MISSOURI	182
SMITH, THOMAS H	JACKSON	098
SMITH, W R	JASPER	102
SMITH, WALLACE B	JACKSON	098
SMITH, WM J	HENRY COUNTY	086
SMOLLER, MARTIN B	ST. CHARLES-LINCOLN	126
SMULL, NED W	JACKSON	098
SNEAD, WILLIAM H	GREENE COUNTY	082
SNEID, DAVID S	JACKSON	098
SNIDER, WILBUR R	JACKSON	098
SNOW, EMASUE	GREENE COUNTY	082
SOBKY, GEORGE	ST. LOUIS METROP.	190
SOHA, JOSEPH J	BOONE	026
SOHN, RICHARD	ST. LOUIS METROP.	190
SOLEM, DANA L	GREENE COUNTY	082
SOLLEY, ROBT F	ST. LOUIS METROP.	190
SOLOMON, FELIX G	ST. LOUIS METROP.	190
SOLOMON, WILLIAM A	JACKSON	098
SOMBUN, TIRDKIAT	ST. LOUIS METROP.	190
SOMERS, JOHN E	BOONE	026
SOMMER, CONRAD S	ST. LOUIS METROP.	190
SOMMER, ROSS B	ST. LOUIS METROP.	190
SOMOZA, JOSE R	CLAY	050
SOONATTRAKUL, WUTHISAK	DUNKLIN	070
SOORYA, NARENDIR T	ST. LOUIS METROP.	190
SOPER, MICHAEL R	JACKSON	098
SOPER, STEVEN J	JACKSON	098
SOPER, WM D	CLAY	050
SOPUCH, JOHN A	ST. LOUIS METROP.	190
SORKIN, MICHAEL I	BOONE	026
SOSEBEE, LEE A	BOONE	026
SOSNA, JACOB P	ST. LOUIS METROP.	190
SOTO, ALBERT A	ST. LOUIS METROP.	190
SOUCY, JOHN C	ST. CHARLES-LINCOLN	126
SOULE, SAML D	ST. LOUIS METROP.	190
SPAFFORD, ALLEN L	JACKSON	098
SPALDING, DAVID L	GREENE COUNTY	082
SPALDING, DONALD G	ST. LOUIS METROP.	190
SPALDING, WILBER B	CLINTON	054
SPALDING, WILBER B	JACKSON	098
SPARGER, CHARLES F	B-W-R-C	034
SPARKMAN, THOMAS C	CAPE GIRARDEAU	042
SPEARS, JOE L	SOUTH CENTRAL	206
SPECTOR, GENE W	ST. LOUIS METROP.	190
SPECTOR, GERSHON	ST. LOUIS METROP.	190
SPENCE, PAUL A	CAPE GIRARDEAU	042
SPENCER, DONALD M	JACKSON	098
SPENO, ANGELO A	ST. LOUIS METROP.	190
SPIES, BARBARA C	JACKSON	098
SPINZIG, EDGAR W	ST. LOUIS METROP.	190
SPITZ, MILTON A	ST. LOUIS METROP.	19D
SPIVACK, ALAN R	ST. LOUIS METROP.	190
SPOENEMAN, MARLIN C	ST. LOUIS METROP.	190
SPONENBERG, DON D	GREENE COUNTY	082
SPORTSMAN, WELOON L	CLAY	050
SPRAUL, JAMES H	ST. LOUIS METROP.	190
SPURGAT, ROBERT M	BUCHANAN	030
SPURGEON, MILO J	BOONE	026
SPURNEY, JOE E	JACKSON	098
SPURNY, OTTO M	JACKSON	098
SQUITIERI, ALPHONSE J	ST. LOUIS METROP.	190
SRIKRISHNA, SIRIVELLA	ST. LOUIS METROP.	19
SRIVISAL, SOMNUK	ST. LOUIS METROP.	19
ST JOHN, THOMAS C	ST. LOUIS METROP.	19
STAAB, GERALD E	JACKSON	09
STABENOW, DAVID L	BOONE	02
STACEY, WALLACE R	JACKSON	09
STAFFORD, WALTER R	ST. LOUIS METROP.	19
STAGGS, WM A	JACKSON	09
STALLARD, DONALD J	BUCHANAN	03
STAMATIS, JOHN J	GREENE COUNTY	08
STANCZYK, OENNIS J	ST. LOUIS METROP.	19
STANFIELD, NEO M	ST. LOUIS METROP.	19
STANLEY, CHARLES G	JACKSON	09
STANLEY, JOHN H	JACKSON	09
STANLEY, ROBT J	ST. LOUIS METROP.	19
STARKLOFF, GENE B	ST. LOUIS METROP.	19
STARKLOFF, MAX	ST. LOUIS METROP.	19
STATLAND, HARRY	JACKSON	09
STATLAND, MORRIS	JACKSON	09
STATON, R H	GRAND RIVER	07
STAUFFACHER, C G	PETTIS	17
STAUFFER, HARRY B	COLE	05
STAUFFER, LARRY K	COLE	05
STAVRIDES, PETE D	ST. LOUIS METROP.	19
STEEL, MAXWELL W	JACKSON	09
STEELE, JACK T	ST. LOUIS METROP.	19
STEELE, JAMES C	M-R-S	13
STEFFEN, LAWRENCE F	JACKSON	09
STEHR, CHRISTIAN H	GREENE COUNTY	08
STEIMAN, BARRY	ST. CHARLES-LINCOLN	12
STEIN, ARTHUR H	ST. LOUIS METROP.	19
STEIN, HARRY J	ST. LOUIS METROP.	19
STEIN, PAUL M	ST. LOUIS METROP.	19
STEINBERG, FRANZ U	ST. LOUIS METROP.	19
STEINER, ALEXANOER J	ST. LOUIS METROP.	19
STELLE, CHAS W	JACKSON	09
STELMACH, WALTER J	JACKSON	09
STEPHEN, CHAS R	ST. LOUIS METROP.	19
STEPHENS, JACK D	JACKSON	09
STEPHENS, LE R	ST. LOUIS METROP.	19
STEPHENS, WM A	ST. LOUIS METROP.	19
STEPHENSON, HUGH E	BOONE	02
STERGEN, NICK E	ST. LOUIS METROP.	19
STERKEL, RICHARO L	ST. LOUIS METROP.	19
STERN, THOS L	JACKSON	09
STESKA, STEPHEN J	ST. LOUIS METROP.	19
STEVENS, EDWARD M	BUCHANAN	03
STEWART, FRANCES H	ST. LOUIS METROP.	19
STEWART, HARRY A	JACKSON	09
STEWART, R W	GREENE COUNTY	08
STEWART, ROBT B	GREENE COUNTY	08
STEWART, RO8T H	PETTIS	17
STEWART, WELLINGTON B	BOONE	02
STICKLE, ARTHUR W	ST. LOUIS METROP.	19
STICKLEY, LOUIS P	ST. LOUIS METROP.	19

---

* Doctor of Osteopathy

STIDMAN, FREDERICK C	JASPER	102
STILL, NOAH L	ST. CHARLES-LINCOLN	126
STILLINGS, WAYNE	ST. LOUIS METROP.	190
STINDEL, CHAS E	ST. LOUIS METROP.	190
STINE, GORDON W	F-G-W	074
STITT, RONALD W	JACKSON	098
STOCKTON, RAYMOND W	JACKSON	098
STOCKWELL, ARTHUR L	JACKSON	098
STOCKWOOD, ROBT C	PETTIS	178
STOHR, PAUL E	ST. LOUIS METROP.	190
STOKES, JAMES M	ST. LOUIS METROP.	190
STOLIAR, BRUCE	ST. LOUIS METROP.	190
STONEMAN, WM	ST. LOUIS METROP.	190
STOUT, CARL N	JACKSON	098
STOY, ROBT P	BOONE	026
STRADER, RICHARD P	ST. LOUIS METROP.	190
STRADFORD, H T	BOONE	026
STRANGE, LESLIE C	M-R-S	130
STRATEMEIER, EDWARD H	JACKSON	098
STRATMAN, CLARENCE A	CLAY	050
STRAUB, DAVID L	JASPER	102
STRAUSS, CARL F	JACKSON	098
STREETOR, RODERICK D	C-M-M-R	046
STREHLMAN, BENJ G	F-G-W	074
STRIBLING, THOS L	JACKSON	098
STRICKER, EAMIL A	MID-MISSOURI	182
STRICKER, HAROLD C	COLE	058
STROBACH, KURT F	ST. LOUIS METROP.	190
STROBACH, ROBT L	WEST CENTRAL	214
STROMBERG, ERIC D	JACKSON	098
STROMINGER, DONALD B	ST. LOUIS METROP.	190
STRONSKY, DAVID	ST. LOUIS METROP.	190
STROUD, MALCOLM H	ST. LOUIS METROP.	190
STRYKER, GAROLD V	ST. LOUIS METROP.	190
STRYKER, WM I	ST. LOUIS METROP.	190
STUART, BYRON M	COOPER	062
STUART, DANL D	C-M-M-R	046
STUART, WALLACE	ST. LOUIS METROP.	190
STUBBLEFIELD, CALVIN F	B-W-R-C	034
STUBBLEFIELD, WAYNE	GREENE COUNTY	082
STUBER, ROBT R	BUCHANAN	030
STUEBNER, ROLAND W	ST. LOUIS METROP.	190
STUERMAN, LAWRENCE G	PIKE	186
STUFFLEBAM, BRIAN W	ST. CHARLES-LINCOLN	126
STUFFLEBAM, ROBT E	GREENE COUNTY	082
STURTEVANT, HARWOOD N	GREENE COUNTY	082
SU, PHILO S	COLE	058
SUAREZ-SOLAR, PEDRO L	ST. CHARLES-LINCOLN	126
SUBA, ANTONIO R	ST. LOUIS METROP.	190
SUDDARTH, STERLING B	JACKSON	098
SUOEKUM, ANN	ST. LOUIS METROP.	190
SUDEKUM, JOSEPH M	ST. LOUIS METROP.	190
SUDHOLT, ALFRED F	ST. LOUIS METROP.	190
SUGARBAKER, EVERETT D	COLE	058
SULIT, ARNULFO P	JACKSON	098
SULL, WON-JONG	PETTIS	178
SULLIVAN, CLEMENT J	ST. LOUIS METROP.	190
SULLIVAN, DAN T	GREENE COUNTY	082
SULLIVAN, WILLIAM J	MID-MISSOURI	182
SULLIVAN, WM K	ST. LOUIS METROP.	190
SULLIVAN, WM W	ST. LOUIS METROP.	190
SUMER, CENGIZ M	ST. LOUIS METROP.	190
SUMER, EMEL A	ST. LOUIS METROP.	190
SUMMERS, JOHN 8	ST. LOUIS METROP.	190
SUMMERS, JOS S	COLE	058
SUMMERS, THOS F	ST. LOUIS METROP.	190
SUNDERMAN, RAYMOND C	ST. LOUIS METROP.	190
SUNDSTROM, FRANK D	GREENE COUNTY	082
SUNSHINE, HERBERT	ST. LOUIS METROP.	190
SUSEELA, DASARI	JACKSON	098
SUSMAN, NOAH	ST. LOUIS METROP.	190
SUTTER, RICHARD A	ST. LOUIS METROP.	190
SUTTON, RICHARD L	JACKSON	098
SUVA, MORFEO M	GREENE COUNTY	082
SUVAN, R	B-W-R-C	034
SUWANABHAND, CHALAW	WEST CENTRAL	214
SVANCAREK, WM P	ST. LOUIS METROP.	190
SWARTWOUT, JOSEPH R	JACKSON	098
SWAYKUS, BERNARD T	ST. LOUIS METROP.	190
SWEENEY, THOS P	GREENE COUNTY	082
SWEET, HERBERT C	ST. LOUIS METROP.	190
SWEIGER, JAMES H	CLINTON	054
SWISHER, ROBT C	JACKSON	098
SWOPE, JOS A	ST. LOUIS METROP.	190
SYDOW, HENRY A	CALLAWAY	038
SYLVANOVICH, W R	ST. LOUIS METROP.	190
SZABADOS, ERNEST D	JACKSON	098
SZYMANSKI, DENNIS C	JACKSON	098
SZYMANSKI, STANLEY R	GRAND RIVER	078

T

TADEO, ROMANITO A	CLAY	050
TAKAHASHI, HIROAKI	JACKSON	098
TALABAN, RAYMUNDO D	ST. LOUIS METROP.	190
TALBERT, CLIFFORD R	CAPE GIRARDEAU	042
TALBOTT, LAWRENCE B	JACKSON	098
TAMBLYN, M C	JACKSON	098
TAN, CHAS H	ST. LOUIS METROP.	190
TANAKA, GEO M	ST. LOUIS METROP.	190
TANEY, GARY W	CLAY	050
TANG, TEODORO	MID-MISSOURI	1B2
TANGSHEWINSIRIKUL, P	ST. LOUIS METROP.	190
TANNER, ROBT H	COLE	058
TAORMINA, MARC K	JACKSON	098
TAPPER, STEVEN	ST. LOUIS METROP.	190
TAPUZ, JAIME T	JACKSON	098
TARRASCH, ERNEST L	GREENE COUNTY	082
TARSON, SOLOMON S	JACKSON	098
TARVER, QUINTON	DUNKLIN	070
TARVYDAS, FRANCIS	NORTH CENTRAL	162
TASHMA, SIGMUND S	ST. LOUIS METROP.	190
TASKER, CHAS B	JACKSON	098
TASSI, ALBERT A	ST. CHARLES-LINCOLN	126
TATKOW, ROBERT W	ST. LOUIS METROP.	190
TAUSSIG, BARRETT L	ST. LOUIS METROP.	190
TAUTE, HERMANN	ST. LOUIS METROP.	190
TAYLOR, EUGENE O	ST. LOUIS METROP.	190
TAYLOR, HENRY M	BOONE	026
TAYLOR, LEO T	OZARKS	166
TAYLOR, LEON A	COLE	058
TAYLOR, VAN W	MINERAL AREA	138
TAYLOR, WM E	GREENE COUNTY	082
TAYOB, ANVER A	ST. LOUIS METROP.	190
TEIBER, FREDERICK W	ST. LOUIS METROP.	190
TEJERO, JONAS S	ST. CHARLES-LINCOLN	126
TEKWANI, HIRALAL T	ST. LOUIS METROP.	190
TEMPLER, JERRY W	BOONE	026
TEMPORAL, ADELAIDE	ST. LOUIS METROP.	190
TEMPORAL, JOSE A	ST. LOUIS METROP.	190
TENDAI, MARK M	GREENE COUNTY	082
TEPPER, ARNOLD	ST. LOUIS METROP.	190
TERNBERG, JESSIE L	ST. LOUIS METROP.	190
TERRY, BOYD E	BOONE	026
TERRY, JAMES F	GREENE COUNTY	082
TERRY, JAMES W	CAPE GIRARDEAU	042
TERRY, THOMAS L	JACKSON	098
TESS, ALLEN F	ST. LOUIS METROP.	190
TESS, MELVIN J	ST. LOUIS METROP.	190
THALBLUM, HARVEY	JACKSON	098
THALE, THOS R	ST. LOUIS METROP.	190
THARP, JUDITH L	LAKE OF THE OZARKS	120
THAWLEY, STANLEY	ST. LOUIS METROP.	190
THEEL, OTTO W	JACKSON	098
THEOBALD, STERLING	MID-MISSOURI	182
THIEL, JOHN A	ST. LOUIS METROP.	190
THIELE, BELMONT R	ST. LOUIS METROP.	190
THIELE, GEO H	JACKSON	098
THIELE, OTTO K	ST. CHARLES-LINCOLN	126
THIERAUF, CHAS G	ST. LOUIS METROP.	190
THIES, JEROME H	WEST CENTRAL	214
THOLE, JOHN J	BUCHANAN	030
THOMA, GEO E	ST. LOUIS METROP.	190
THOMAS, CHRISTOPHER Y	JACKSON	098
THOMAS, FRED A	CLAY	050
THOMAS, GRACY	ST. LOUIS METROP.	190
THOMAS, HORACE E	BOONE	026
THOMAS, JAMES R	BOONE	026
THOMAS, LEWIS J	ST. LOUIS METROP.	190
THOMAS, ROBERT M	BOONE	026
THOMAS, THOMAS C	CLAY	050
*THOMAS-RICHARDS, JOSE R	JACKSON	098
THOMASSON, DAVID D	GREENE COUNTY	082
THOMASSON, MARY W	ST. LOUIS METROP.	190
THOMPSON, CHAS L	JACKSON	098
THOMPSON, FREDERICK G	BUCHANAN	030

---

* Doctor of Osteopathy

THOMPSON, FREDERICK L	WEST CENTRAL	214
THOMPSON, MERLYN B	ST. LOUIS METROP.	190
THORNTON, FRED H	SEMO	202
THROGMORTON, HOWARD B	SEMO	202
THRONE, BENNIE J	JACKSON	098
THRONE, ELIAS M	JACKSON	098
THURMAN, HILL C	PLATTE	188
THURMANN, MANFRED	ST. LOUIS METROP.	190
THURSTON, DONALD L	ST. LOUIS METROP.	190
THYM, HENRY P	ST. LOUIS METROP.	190
TICE, WAYNE K	JACKSON	098
TICHENOR, ROBT W	ST. LOUIS METROP.	190
TIETJEN, FRED O	LAKE OF THE OZARKS	120
TIFFANY, DELBERT E	CAPE GIRARDEAU	042
TILL, BENNIE N	B-W-R-C	034
TILLEMA, DAVID A	JACKSON	098
TILLMAN, ERNEST	ST. LOUIS METROP.	190
TILLMAN, MARY A	ST. LOUIS METROP.	190
TILLMAN, WALTER W	GREENE COUNTY	082
TINDALL, ROBT N	ST. LOUIS METROP.	190
TINSLEY, AUSTIN R	B-W-R-C	034
TINSLEY, JOHN C	BOONE	026
TIOJANCO, MILAGROS E	JACKSON	098
TIOJANCO, REYNALDO R	JACKSON	098
TIPPETT, JACK C	ST. LOUIS METROP.	190
TITTERINGTON, FRANK W	JACKSON	098
TJOFLAT, OLIVER E	ST. LOUIS METROP.	190
TOBIN, ROBT F	BUCHANAN	030
TOMBRIDGE, THOS L	GREENE COUNTY	082
TOMLINSON, WM L	ST. LOUIS METROP.	190
TOMPSON, ROBT V	C-M-M-R	046
TONELLI, GEO L	ST. LOUIS METROP.	190
TOOMEY, JAMES M	ST. LOUIS METROP.	190
TORIN, BERNICE A	ST. LOUIS METROP.	190
TORO, ENRIQUE F	ST. LOUIS METROP.	190
TORONTOW, RAPHAEL J	WEST CENTRAL	214
TOUBES, DANIEL B	JACKSON	098
TRAXEL, WM L	B-W-R-C	034
TREIMAN, ROBT C	ST. LOUIS METROP.	190
TRIGG, JOSEPH F	ST. LOUIS METROP.	190
TRIMBLE, GEO X	JACKSON	098
TRINIDAD, HERMANITO R	GRAND RIVER	078
TRIPLETT, DANL A	CLAY	050
TRISKA, ROLAND A	ST. LOUIS METROP.	190
TROEH, MELVIN R	JACKSON	098
TROTTA, PHILIP C	ST. LOUIS METROP.	190
TROTTER, FRANCIS O	ST. LOUIS METROP.	190
TROTTER, WM Y	GREENE COUNTY	082
TROWBRIDGE, BARNARD C	JACKSON	098
TROWBRIDGE, ELLSWORTH	JACKSON	098
TROXIL, ELIZABETH B	GREENE COUNTY	082
TRUE, JAMES D	CLAY	050
TRUEBLOOD, ALVA C	ST. LOUIS METROP.	190
TRUEBLOOD, MICHAEL C	CAPE GIRARDEAU	042
TRUGLY, EDITH S	ST. LOUIS METROP.	190
TRUMBOWER, WM D	BOONE	026
TRUNKO, LEO	ST. LOUIS METROP.	190
TSANG, JOHN L	GREENE COUNTY	082
TSCHOE, BJONG-SUHN	ST. LOUIS METROP.	190
TSCHUDIN, GARLAND	ST. LOUIS METROP.	190
TSIFUTIS, ARGYRIOS A	ST. LOUIS METROP.	190
TUANO, ANGELO	ST. LOUIS METROP.	190
TUCKER, EUGENE F	ST. LOUIS METROP.	190
TUCKER, GEO L	ST. LOUIS METROP.	190
TULLY, RICHARD J	BOONE	026
TUMA, ARTHUR T	B-W-R-C	034
TUMANUT, BENESTO F	CLAY	050
TUMIALAN, LUIS	ST. LOUIS METROP.	190
TUOHY, GERALD F	JACKSON	098
TURANO, WM L	JACKSON	098
TURFBOER, ROBERT	JASPER	102
TURGEON, RONALD P	ST. LOUIS METROP.	190
TURNER, GLENN O	GREENE COUNTY	082
TURNER, JAMES K	ST. LOUIS METROP.	190
TURNER, KIRBY L	B-W-R-C	034
TURNER, RONALD M	JACKSON	098
*TURNER, TIMOTHY T	ST. LOUIS METROP.	190
TURNG, SHU Y	ST. LOUIS METROP.	190
TUTERA, DOMINIC F	JACKSON	098
TUTTLE, JAY F	MINERAL AREA	138
TWEDELL, DONALD L	ST. LOUIS METROP.	190
TWIN, EDWARD J	JACKSON	098
TWYMAN, RICHARD A	JACKSON	098
TYGETT, JOS N	CAPE GIRARDEAU	042

U

UHLEMANN, JOHN H	ST. CHARLES-LINCOLN	126
UHLEMEYER, HENRY A	ST. LOUIS METROP.	190
ULETT, GEO A	ST. LOUIS METROP.	190
ULETT, PEARL C	ST. LOUIS METROP.	190
UMALI, EMILIANO C	F-G-W	074
UMALI-SESSOMS, NORA C	JEFFERSON	106
UMALI-SESSONS, NORA C	JEFFERSON	106
UMAR, IBRAHIM S	ST. LOUIS METROP.	190
UNDERWOOD, DICK H	JACKSON	098
UNDERWOOD, JOHNSON	CLAY	050
UNGVARI, JOS C	ST. LOUIS METROP.	190
UPADHYAYA, D M	ST. LOUIS METROP.	190
UPSHER, ALBERT E	JACKSON	098
UTLEY, JAMES	ST. LOUIS METROP.	190
UTTERMAN, WM F	PERRY-STE. GENEVIEVE	174

V

VACCA, JOS B	ST. LOUIS METROP.	190
VADLAMANI, S	ST. LOUIS METROP.	190
VAFI, HOUSHANG	ST. CHARLES-LINCOLN	126
VAJARANANT, MANIT	LAFAYETTE-RAY	118
VAKASSI, N	ST. LOUIS METROP.	190
VALACH, FRANK J	ST. LOUIS METROP.	190
VALDES, ORESTES S	ST. LOUIS METROP.	190
VALENTINE, JOHN D	JACKSON	098
VALERA, SALVADOR S	BUCHANAN	03
VALINS, EUGENE	JACKSON	09
VALKO, ROBERT J	ST. LOUIS METROP.	19
VALTIERRA, CESAR A	ST. LOUIS METROP.	19
VAN BIBER, JAMES T	JACKSON	09
VAN BUSKIRK, TERRANCE E	JACKSON	09
VAN BUSKIRK, WM C	JACKSON	09
VAN DERVOORT, ROBT L	BOONE	02
VAN DYKE, ELMER H	PETTIS	17
VAN GOIDSENHOVEN, GUY E	ST. LOUIS METROP.	19
VAN LEEUWEN, GERARD	COLE	05
VAN MATRE, REBER M	ST. LOUIS METROP.	19
VAN NORMAN, ROBT T	ST. LOUIS METROP.	19
VAN STONE, JOHN C	BOONE	02
VAN VRANKEN, EUGENE E	COLE	05
VANDIVER, VIRGIL D	LAKE OF THE OZARKS	12
VANDIVORT, PAUL M	ST. LOUIS METROP.	19
VANDOVER, JOHN T	ST. LOUIS METROP.	19
VARDELEON, ROGELIO V	ST. LOUIS METROP.	19
VARGAS, JAIME	ST. LOUIS METROP.	19
VARGAS, TEODORO	ST. LOUIS METROP.	19
VARMA, DEVENDRA K	B-W-R-C	03
VART, GARY R	ST. CHARLES-LINCOLN	12
VATTEROTT, PAUL B	ST. LOUIS METROP.	19
VATTEROTT, PAUL B	ST. LOUIS METROP.	19
VAUGHAN, J R	ST. LOUIS METROP.	19
VAUGHN, JAMES W	JACKSON	09
VAUGHN, LEROY W	ST. LOUIS METROP.	19
VELASCO, ERNESTO T	ST. LOUIS METROP.	19
VELUZ, BENITO I	ST. LOUIS METROP.	19
VENEGONI, ROBT L	JACKSON	09
VENSEL, LEE H	GREENE COUNTY	08
VENTUS, MANUEL A	ST. LOUIS METROP.	19
VERA, ENRIQUE	JACKSON	09
VERDE, JULIAN N	ST. LOUIS METROP.	19
VERGARA, GERARDO G	JACKSON	09
VERZOLA, EUFEMIO G	JEFFERSON	10
VESCOVO, PAUL C	PLATTE	18
VEST, JAMES C	ST. LOUIS METROP.	19
VIAMONTES, GLORIA E	ST. LOUIS METROP.	19
VIAMONTES, JORGE A	ST. LOUIS METROP.	19
VIANZON, ELIZABETH R	ST. LOUIS METROP.	19
VIBULAKAOPUN, PAIRAT	MINERAL AREA	13
VICKAR, GARRY M	ST. LOUIS METROP.	19
VICTOR, FRANK R	JACKSON	09
VIDALS, VICTOR G	JACKSON	09
VIDHEECHAROEN, SOMBOON	ST. LOUIS METROP.	19
VIERS, WAYNE A	ST. LOUIS METROP.	19
VIGHI, JAMES R	ST. CHARLES-LINCOLN	12
VIJUNGCO, HERMINIA D	ST. LOUIS METROP.	19
VILAR, PIO M	ST. LOUIS METROP.	19
VILLAFUERTE, NILA A	ST. LOUIS METROP.	19
VILLAFUERTE, RENATO G	ST. LOUIS METROP.	19
VILLAHERMOSA, JUANITO L	ANDREW	01
VILLAMAR, ELIZABETH N	ST. LOUIS METROP.	19

---

* Doctor of Osteopathy

VILLANUEVA, ANGELA A	JACKSDN	098
VILLARAMA, ANTONID P	ST. LDUIS METRDP.	190
VILMER, CHARLES E	CLAY	050
VILMER, STEPHEN E	CLAY	050
VILDRIA, ALBERTD B	ST. LOUIS METRDP.	190
VINCENT, JACK C	JACKSON	098
VINSON, HAROLD A	WEST CENTRAL	214
VINYARD, JACK L	JASPER	102
VIRAGHATY, JULIUS G	ST. LOUIS METROP.	190
VIRANT, JOHN A	ST. LOUIS METROP.	190
VIRIL, LEONARDO C	JACKSON	098
VISOT, LUIS R	BOONE	026
VITALE, ANTHONY J	ST. LOUIS METROP.	190
VITALE, NICHOLAS S	ST. LOUIS METROP.	190
VITALE, THOMAS J	ST. LOUIS METROP.	190
VITT, EDWIN F	ST. LOUIS METROP.	190
VIVIANO, JOS G	ST. LOUIS METROP.	190
VDGEL, ARTHUR P	JACKSON	098
VOGEL, CURT M	BOONE	026
VOLK, GEO E	JACKSON	098
VDLLMAR, LEWIS C	ST. LOUIS METROP.	190
VON LINTEL, THOMAS	JACKSON	098
VOTAW, RO8T E	ST. LOUIS METROP.	190
VOTH, HAROLD W	JACKSON	098
VOURNAS, CHRISTOPHER G	ST. LOUIS METROP.	190

W

WACHTER, RONALO M	GREENE COUNTY	082
WACKER, LEO L	ST. LOUIS METROP.	190
WADDELL, KENNETH E	GREENE COUNTY	082
WADDELL, THOMAS H	JACKSON	098
WADDLE, THEODORE L	SEMO	202
WADE, FREDERICK E	JACKSON	098
WAOLOW, ERNEST E	BUCHANAN	030
WAECKERLE, JOSEPH F	JACKSON	098
WAGAN, PRIMITIVA C	ST. LOUIS METROP.	190
WAGGONER, CHAS M	BOONE	026
WAGGONER, SHARON E	BUCHANAN	030
WAGNER, JOHN R	ST. LOUIS METROP.	190
WAGNER, PAUL J	JACKSON	098
WAKEFIELD, FRANKLIN H	JACKSON	098
WAKEMAN, J N	GREENE COUNTY	082
WAKEMAN, NEWT	GREENE COUNTY	082
WAKERLIN, GEO E	BOONE	026
WALO, DONALD M	CLAY	050
WALD, STANLEY M	ST. LOUIS METROP.	190
WALOMAN, RICHARD A	JACKSON	098
WALENTIK, CORINNE	ST. LOUIS METROP.	190
WALKER, AMBROSE T	SOUTH CENTRAL	206
WALKER, FRANCIS S	ST. LOUIS METROP.	190
WALKER, GARY	GREENE COUNTY	082
WALKER, HARVEY	ST. LOUIS METROP.	190
WALKER, J L	ST. LOUIS METROP.	190
WALKER, JAMES C	JACKSON	098
WALKER, ORVILLE C	JACKSON	098
WALKER, PAUL W	JASPER	102
WALKER, WILLARD B	ST. LOUIS METRDP.	190
WALKER, WM M	GREENE COUNTY	082
WALL, EMMETT D	ST. LDUIS METRDP.	190
WALL, HARRY C	JACKSON	098
WALL, JOE A	SOUTH CENTRAL	206
WALL, LEONARD A	JACKSON	098
WALL, LESTER E	ST. LOUIS METROP.	190
WALLACE, EDGAR S	AUDRAIN	014
WALLACK, MARC K	ST. LOUIS METROP.	190
WALLY, JOHN W	JACKSON	098
WALSH, JAMES W	ST. LOUIS METROP.	190
WALSH, MARTIN J	ST. CHARLES-LINCOLN	126
WALTER, ARCHIE L	PETTIS	178
WALTER, KENNETH E	ST. LOUIS METROP.	190
WALTER, WM L	ST. LOUIS METROP.	190
WALTERS, HAROLO E	ST. LOUIS METROP.	190
WALTERS, HENRY W	ST. LOUIS METROP.	190
WALTERS, LAURA	BOONE	026
WALTERS, RICHARD C	ST. LOUIS METROP.	190
WALTERSCHEID, JOHN H	M-R-S	130
WALTHER, ROY A	ST. LOUIS METROP.	190
WALTMAN, STEPHEN R	ST. LOUIS METROP.	190
WALTON, FRANKLIN E	ST. LOUIS METROP.	190
WALTON, JOHN D	SEMO	2D2
WALTRIP, ROY T	SEMO	202
WALTZ, JAMES R	CLAY	050
WALZ, BRUCE J	ST. LOUIS METROP.	190
WANAMAKER, JOHN M	NORTHWEST	158
WANKUM, ROBERT P	COLE	058
WANLESS, ROBERT C	ST. LOUIS METROP.	190
WANTUCK, DONALD K	GREENE COUNTY	082
WARD, JOE W	LAFAYETTE-RAY	118
WARO, ROBT L	ST. LOUIS METROP.	190
WARREN, JAMES C	ST. LOUIS METROP.	190
WARREN, WM H	SOUTH CENTRAL	206
WARRES, HERBERT L	GREENE COUNTY	082
WARRIER, RAJKUMAR K	PERRY-STE. GENEVIEVE	174
WASHBURN, JOHN L	LAKE OF THE OZARKS	120
WASHINGTON, EOWARD L	BOONE	026
WASHINGTON, WALTER	ST. LOUIS METROP.	190
*WASSERMAN, GARY S	JACKSON	098
WASSERMAN, HELMAN C	ST. LOUIS METROP.	190
WATERFIELO, JIM R	GREENE COUNTY	082
WATERMAN, FRANKLIN M	CLAY	050
WATERS, HUGH R	ST. LOUIS METROP.	190
WATERS, JEFFREY A	JACKSON	098
WATHANA-CHAROEN, SUCHINT	JACKSON	098
WATKINS, GAREY L	ST. LOUIS METROP.	190
WATKINS, GEO L	MINERAL AREA	138
WATSON, TREVDR F	BOONE	026
WATTS, BYRON E	COLE	058
WATTS, CLARK C	BOONE	026
WAXELMAN, ROGER J	ST. LOUIS METROP.	190
WAXMAN, HERBERT J	JACKSON	098
WAXMAN, JANE Z	JACKSON	098
WAYNE, SHERWYN J	ST. LDUIS METRDP.	190
WEBB, HARRY E	JACKSDN	098
WEBB, JDHN M	CLAY	050
WEBB, PAUL B	ST. LOUIS METRDP.	190
WE88ER, WM B	ST. LOUIS METROP.	190
WEBER, J R	ST. LOUIS METROP.	190
WEBER, RAYMOND K	ST. LOUIS METROP.	190
WEBER, SOL	ST. LOUIS METROP.	190
WEE, GEO C	ST. LOUIS METROP.	190
WEED, RANDAL	BUCHANAN	030
WEEKS, PAUL M	ST. LOUIS METROP.	190
WEIDE, ALLAN R	CLAY	D50
WEIFORD, EDWARD C	JACKSON	098
WEIGEL, JAMES W	BOONE	026
WEILER, THOS J	ST. LOUIS METROP.	190
WEINAND, ERNEST E	BUCHANAN	030
WEINHAUS, ROBT S	ST. LOUIS METROP.	190
WEINSTEIN, CHAS L	JACKSON	098
WEIR, DON C	ST. LOUIS METROP.	190
WEIR, ROBT K	JACKSON	098
WEIR, ROYAL A	ST. LOUIS METROP.	190
WEIS, LANDY	ST. LOUIS METROP.	190
WEISMAN, EDWARD B	JACKSON	098
WEISMAN, RENATE D	ST. LOUIS METROP.	190
WEISS, ALAN N	ST. LOUIS METROP.	190
WEISS, HOWARD	ST. LOUIS METROP.	190
WEISS, JAMES J	COLE	058
WEISS, JAMES M	BOONE	026
WEISS, STUART	ST. LOUIS METROP.	190
WELDON, CLARENCE S	ST. LOUIS METROP.	190
WELDON, VIRGINIA V	ST. LOUIS METROP.	190
WELGUS, HOWARD G	ST. LOUIS METROP.	190
WELL, JULIUS W	M-R-S	130
WELLS, DONALO E	JACKSON	098
WELLS, JAMES A	JACKSON	098
WELLS, JOHN H	JACKSON	098
WELLS, STANLEY D	JACKSON	098
WELNER, AMOS	ST. LOUIS METROP.	190
WELNER, ZILA	ST. LOUIS METROP.	190
WELSH, LAURENCE C	ST. LOUIS METROP.	190
WELTSCHEFF, CHRISTO A	HENRY COUNTY	086
WEMPE, GEO R	NORTHWEST	158
WENNEKER, ALVIN S	ST. LOUIS METROP.	190
WENNER, HERBERT A	JACKSON	098
WENTZEL, LOUIS R	ST. LOUIS METROP.	190
WERNER, DEAN F	CLAY	050
WERNER, FRANKLIN C	CLAY	050
WERNER, HAROLD V	BOONE	026
WERNER, WM A	ST. LOUIS METROP.	190
WERTH, JOS A	COLE	058
WEST, HAROLD D	JACKSON	098
WEST, JOS W	ST. LOUIS METROP.	190
WESTERFELD, ROY A	ST. CHARLES-LINCOLN	126
WESTERMAN, ROBT N	ST. LOUIS METROP.	190

---

* Doctor of Osteopathy.

WESTHOFF, DAVID D	COLE	058
WESTRUP, ELLSWORTH A	ST. LOUIS METROP.	190
WETZEL, GUS S	HENRY COUNTY	086
WEYERICH, LEON F	ST. LOUIS METROP.	190
WEYERICH, NOEL F	ST. LOUIS METROP.	190
WEYGANDT, GLENN R	ST. LOUIS METROP.	190
WHEELER, CHAS B	JACKSON	098
WHEELER, PAUL D	CLAY	050
WHEELER, ROBT L	WEST CENTRAL	214
WHITAKER, JAMES H	JACKSON	098
WHITAKER, TOPSY H	SEMO	202
WHITE, BARRY B	B-W-R-C	034
WHITE, BRUCE I	ST. LOUIS METROP.	190
WHITE, CHAS H	JACKSON	098
WHITE, EUGENE F	MID-MISSOURI	182
WHITE, JAMES S	JACKSON	098
WHITE, NEWTON B	ST. LOUIS METROP.	190
WHITE, R N	GREENE COUNTY	082
WHITE, RUSSELL D	OZARKS	166
WHITE, STOUGHTON F	JACKSON	098
WHITE, WM E	JACKSON	098
WHITE, WM H	ST. LOUIS METROP.	190
WHITENER, MILES C	ST. LOUIS METROP.	190
WHITENER, PAUL R	ST. LOUIS METROP.	190
WHITESIDE, LEO A	ST. LOUIS METROP.	190
WHITLOCK, C C	GREENE COUNTY	082
WHITMAN, DANIEL S	JACKSON	098
WHITMAN, DOYLE C	JACKSON	098
WHITMORE, J S	JACKSON	098
WHITSELL, ORA E	BUCHANAN	030
WHITTAKER, CHAS K	JACKSON	098
WHITTEN, J S	CAPE GIRARDEAU	042
WHITTEN, M F	JASPER	102
WHITTICO, JAMES M	ST. LOUIS METROP.	190
WHITTIER, FREDERICK C	BOONE	026
WIANT, JAMES R	ST. LOUIS METROP.	190
WICHIENKUER, PEIRUCH	ST. LOUIS METROP.	190
WICKS, EDWIN O	CLAY	050
WIEDERSHINE, LEONARD J	ST. LOUIS METROP.	190
WIEGAND, HERBERT C	ST. LOUIS METROP.	190
WIEMAN, HARRY K	JASPER	102
WIEN, IRVING A	JACKSON	098
WIENCH, DELANE F	MID-MISSOURI	182
WIENKE, EUGENE C	ST. LOUIS METROP.	190
WIGGINS, ROLAND L	BOONE	026
WIL8ER, ROBT D	JACKSON	098
WIL8ERS, RAYMOND H	AUDRAIN	014
WILBOIS, RONALD P	ST. LOUIS METROP.	190
WILCOX, RUTH E	JASPER	102
WILCOXEN, WM B	PIKE	186
WILES, JACK N	SOUTH CENTRAL	206
WILHELM, WARREN F	JACKSON	098
WILKINS, MICHAEL S	JACKSON	098
WILKINSON, CHAS B	JACKSON	098
WILKINSON, DAVID	ST. LOUIS METROP.	190
WILKINSON, EVERETT A	JACKSON	098
WILLCOXON, ROBT L	JASPER	102
WILLIAMS, ANDREW F	BOONE	026
WILLIAMS, CAROL F	ST. LOUIS METROP.	190
WILLIAMS, FENTON A	JACKSON	098
WILLIAMS, FRANK R	JACKSON	098
WILLIAMS, GEO P	JACKSON	098
WILLIAMS, JAMES R	OZARKS	166
WILLIAMS, JOHN M	CLAY	050
WILLIAMS, JOHN W	LAFAYETTE-RAY	118
WILLIAMS, JOHN W	GREENE COUNTY	082
WILLIAMS, JOS C	JACKSON	098
WILLIAMS, JOSEPH	ST. LOUIS METROP.	190
WILLIAMS, RAY D	ST. LOUIS METROP.	190
WILLIAMS, ROBT D	CLAY	050
WILLIAMS, ROLAND D	JACKSON	098
WILLIAMS, ROY J	ST. LOUIS METROP.	190
WILLIAMS, STARKS J	JACKSON	098
WILLIAMS, THOMAS A	JACKSON	098
WILLIAMSON, GEO L	CLAY	050
WILLIAMSON, WALTER E	ST. LOUIS METROP.	190
WILLIS, H R	ST. LOUIS METROP.	190
WILLMAN, CHAS R	BUCHANAN	030
WILLMAN, MARTIN L	ST. LOUIS METROP.	190
WILLMAN, VALLEE L	ST. LOUIS METROP.	190
WILLOUGHBY, JAMES W	JACKSON	098
WILLOUGHBY, JEAN B	JACKSON	098
WILLUMSEN, HENRY C	BUCHANAN	030
WILSON, ALICE H	JASPER	102
WILSON, CHAS F	CAPE GIRARDEAU	042
WILSON, CLIFFORD C	JACKSON	098
WILSON, DAVID E	CLAY	050
WILSON, FRED K	GRAND RIVER	078
WILSON, GEO P	8OONE	026
WILSON, JOHN E	BOONE	026
WILSON, KEITH S	ST. LOUIS METROP.	190
WILSON, ROGER W	JACKSON	098
WILSON, ROY E	GREENE COUNTY	082
WILSON, SUSAN L	ST. LOUIS METROP.	190
WILUCKI, MELVIN R	ST. LOUIS METROP.	190
WIMMER, WARREN J	ST. LOUIS METROP.	190
WINDMILLER, MYRL E	BOONE	026
WINDSOR, CHAS E	ST. LOUIS METROP.	190
WINDSOR, DAVID G	BUCHANAN	030
WINEGAR, ALVON C	COLE	058
WINER, HERBERT J	JACKSON	098
WINER, MICHAEL H	ST. LOUIS METROP.	190
WINER, NATHANIEL	JACKSON	098
WINKELMAN, ESTHER 8	JACKSON	098
WINN, GEO W	COOPER	062
WINNACKER, JOHN L	BOONE	026
WINSKY, ARLEN D	GREENE COUNTY	082
WINSTON, BERNARD H	JACKSON	098
WINTER, JOHN H	ST. LOUIS METROP.	190
WINTER, TYRUS D	ST. LOUIS METROP.	190
WINTERS, KATHLEEN	ST. LOUIS METROP.	190
WIPFLER, EARL J	ST. CHARLES-LINCOLN	126
WIRTHLIN, EDWARD H	ST. LOUIS METROP.	190
WISE, GEO W	JACKSON	098
WISE, GORDON F	GREENE COUNTY	082
WISE, MORRIS F	JACKSON	098
WISSMATH, FRANK S	ST. LOUIS METROP.	190
WISSNER, SETH E	ST. LOUIS METROP.	190
WITHERS, ORVAL R	JACKSON	098
WITHROW, DONALD	ST. LOUIS METROP.	190
WITHROW, JOHN B	CLAY	050
WITT, CLYDE M	ST. LOUIS METROP.	190
WITTGEN, EDWARD M	ST. LOUIS METROP.	190
WITTLER, HARRY A	ST. LOUIS METROP.	190
WITTMER, SAML C	GREENE COUNTY	082
WOCHNER, RAYMOND D	ST. LOUIS METROP.	190
WOEHL, JOS J	JACKSON	098
WOLANSKI, EUGENE G	BUCHANAN	030
WOLCOTT, JAMES B	F-G-W	074
WOLF, JACK W	JACKSON	098
WOLF, MARION L	GREENE COUNTY	082
WOLF, MITCHELL L	ST. LOUIS METROP.	190
WOLFE, EDWARD M	ST. LOUIS METROP.	190
WOLFE, JAMES B	GREENE COUNTY	082
WOLFF, DOLORES J	ST. LOUIS METROP.	190
WOLFF, GERALD A	ST. LOUIS METROP.	190
WOLFF, HAROLD D	ST. LOUIS METROP.	190
WOLFF, PAUL G	CAPE GIRARDEAU	042
WOLFF, RAY J	ST. LOUIS METROP.	190
WOLFGRAM, EDWIN D	ST. LOUIS METROP.	190
WOLFRAM, PHILIP H	CLAY	050
WOMMACK, FRED L	OZARKS	166
WONG, GEO	GREENE COUNTY	082
WOOD, BENNETT R	ST. LOUIS METROP.	190
WOOD, DAVID G	JACKSON	098
WOOD, GEO F	CALLAWAY	038
WOOD, GEO H	JASPER	102
WOOD, JAMES A	ST. LOUIS METROP.	190
WOOD, JOHN A	ST. LOUIS METROP.	190
WOOD, THOS O	B-W-R-C	034
WOODRUFF, CALVIN W	BOONE	026
WOODRUFF, SHARON L	ST. LOUIS METROP.	190
WOODS, HAROLD V	JACKSON	098
WOODS, SAML D	JACKSON	098
WOODS, WALTON C	JACKSON	098
WOODSON, WILLIAM H	B-W-R-C	034
WOODWARD, WM W	JACKSON	098
WOOL, GERALD	ST. LOUIS METROP.	190
WOOLDRIDGE, WILFRED E	GREENE COUNTY	082
WOOLSEY, JOYCE E	ST. LOUIS METROP.	190
WOOLSEY, ROBT M	ST. LOUIS METROP.	190
WOOTEN, MICHAEL 8	GREENE COUNTY	082
WORD, PARKER H	ST. LOUIS METROP.	190
WORKMAN, CHAS E	CLAY	050
WORKMAN, GEO M	F-G-W	074

WORLEY, CHAS A	PETTIS	178
WORTMANN, ROBT F	JACKSON	098
WOTAWA, WM J	ST. LOUIS METROP.	190
WOY, GEORGE H	CLAY	050
WRAY, ROBT C	ST. LOUIS METROP.	190
WRAY, ROLLA B	WEST CENTRAL	214
WRIGHT, EARL J	CLAY	050
WRIGHT, R P	JACKSON	098
WU, SHUH-MIN	JACKSON	098
WU, WM Q	JACKSON	098
WULFF, GEO J	ST. LOUIS METROP.	190
WURR, DIETER H	ST. LOUIS METROP.	190
WURSTER, JERRY B	JACKSON	098
WURSTER, W J	JACKSON	098
WYATT, LOIS C	ST. LOUIS METROP.	190
WYRSCH, LEO M	GREENE COUNTY	082

X

XYNOS, FRANCIS	ST. LOUIS METROP.	190

Y

YAEGER, GERALD A	ST. CHARLES-LINCOLN	126
YALCIN, ENVER	ST. LOUIS METROP.	190
YANCEY, DANIEL L	GREENE COUNTY	082
YANNAKAKIS, JOHN E	ST. LOUIS METROP.	190
YANOW, MITCHELL	ST. LOUIS METROP.	190
YAP, MARDONIO J	ST. LOUIS METROP.	190
YARBRO, JOHN W	BOONE	026
YASIN, FAZLE M	ST. LOUIS METROP.	190
YATES, DARREL W	ST. LOUIS METROP.	190
YAZDI, ATAOLLAH M	ST. LOUIS METROP.	190
YEAGER, HELEN E	BOONE	026
YECIES, LEWIS D	ST. LOUIS METROP.	190
YESUS, YOHANNES W	BOONE	026
YLAGAN, AMANDO	ST. LOUIS METROP.	190
YOON, JIN S	GRAND RIVER	078
YORE, RICHARD W	ST. LOUIS METROP.	190
YOSELEVSKY, ROBERT	ST. LOUIS METROP.	190
YOSKIT, HARRY	JEFFERSON	106
YOULL, DONALD V	JACKSON	098
YOUMANS, RONALO A	JACKSON	098
YOUNG, CALVIN C	JASPER	102
YOUNG, JAMES E	JACKSON	098
YOUNG, JESSE W	JACKSON	098
YOUNG, ROBT B	MID-MISSOURI	182
YOUNG, THOS J	BUCHANAN	030
YOUNG, WILLIAM C	B-W-R-C	034
YOUNGBLOOO, JAMES P	JACKSON	098
YOUNGE, WALTER A	ST. LOUIS METROP.	190
YOUNGER, ANITA C	ST. LOUIS METROP.	190
YOUNGER, ERNEST	ST. LOUIS METROP.	190
YOUSSEF, ELHAM	ST. LOUIS METROP.	190
YU, HONG Y	ST. LOUIS METROP.	190
YU, MARIO K	JACKSON	098

Z

ZAHN, FREDERICK R	F-G-W	074
ZAHN, ROBT L	GREENE COUNTY	082
ZAHONY, IVAN	JACKSON	098
ZAHORSKY, CARROLL L	JACKSON	098
ZAHORSKY, THEODORE S	ST. LOUIS METROP.	190
ZEFFREN, J L	ST. LOUIS METROP.	190
ZEIGLER, JOS M	ST. LOUIS METROP.	190
ZEKERT, HORST	ST. LOUIS METROP.	190
ZELLER, DARRELL E	JACKSON	098
ZERR, CHARLES H	JACKSON	098
ZIA, MUHAMMAO S	JACKSON	098
ZIEGELMEYER, JOHN S	ST. LOUIS METROP.	190
ZIEGLER, VINCENT E	ST. LOUIS METROP.	190
ZIEMIANSKI, MATTHEW C	JACKSON	098
ZIMMERMAN, HERBERT B	ST. LOUIS METROP.	190
ZIMMERMAN, JOE A	DUNKLIN	070
ZINGALE, FRANK G	ST. LOUIS METROP.	190
ZIVNUSKA, FREDERICK R	ST. LOUIS METROP.	190
ZOFFUTO, ANTHONY C	CAPE GIRARDEAU	042
ZOGRAFAKIS, GEO H	ST. LOUIS METROP.	190
ZOLLER, DAVIO D	JACKSON	098
ZUCKNER, JACK	ST. LOUIS METROP.	190
ZUKAITIS, MARK G	JACKSON	098
ZUKOWSKI, EDWARD T	ST. LOUIS METROP.	190
ZWART, CLAUDE H	ST. LOUIS METROP.	190
ZWERENZ, BRUNO H	JACKSON	098
ZWIRN, HANS B	ST. LOUIS METROP.	190

Roster of Members by Component Societies

(Please note! Listing is by code numbers in numerical order.)

010—ANDREW

BAKER, WARREN C GP
703 HIGHWAY
SAVANNAH, MO 64485
KELLEY, GILBERT B GP
703 W HIGHWAY
SAVANNAH, MO 64485
VILLAHERMOSA, JUANITO L GS
703 W HIGHWAY
SAVANNAH, MO 64485

014—AUDRAIN

AJANS, ZAKI A P
704 E MONROE
MEXICO, MO 65265
BOYCE, JOHN M PTH
2703 CLARKLN
COLUMBIA, MO 65201
BRADLEY, WM W GP
120 N ROLLINS
CENTRALIA, MO 65240
COMFORT, GEO D GP
MEDICAL BLDG
626 SUMMIT
MEXICO, MO 65265
COTTEY, JOHN H GS
MEX PROF BLDG SUM MED P
MEXICO, MO 65265
DAUT, DONALD W IM
200 E MONROE ST
MEXICO, MO 65265
DAVIS, LEONARD L ORS
626 SUMMIT
MEXICO, MO 65265
EKERN, HERMAN P GP
626 SUMMIT
MEXICO, MO 65265
GARCIA, CHAS L GP
203 E JACKSON ST
MEXICO, MO 65265
GUALBERTO, CRISANTO GS
209 W WASHINGTON
VANDALIA, MO 63382
HOXWORTH, GERALD M DR
415 E MONROE
MEXICO, MO 65265
HUQ, MD N OPH
HUQ PROFESSIONAL EYE SE
MEXICO PROF BLDG SUI
MEXICO, MO 65265
JOLLY, BENJ N GS
112 N CLARK ST
MEXICO, MO 65265
JOLLY, WM H GS
112 N CLARK ST
MEXICO, MO 65265
KALLENBACH, GLEN P GP
P O BOX 249
MEXICO, MO 65265
LANKFORD, HAROLD D GP
626 SUMMIT SUITE B
MEXICO, MO 65265
MULLEN, MARY E IM
RT. 1, BOX 43
RUSH HILL, MO 65802
NADINOLA, CHENNAIAH C GP
JCT PLEASANT & 54 EAST
FARBER, MO 63345
O'BRIEN, HARRY F GP
111 E MONROE ST
MEXICO, MO 65265
REDDIN, PATRICK C OBG
WALLMAR & BUILDING
MEXICO, MO 65265
RODES, NED D 1M
115 BUSINESS LOOP MO W
COLUMBIA, MO 65201
SIRIPIPAT, PALLOP OBG
626 SUMMIT ST
MEXICO, MO 65265
WALLACE, EDGAR S OTO
626 SUMMIT MEDICAL PARK
MEXICO, MO 65265
WILBERS, RAYMOND H GS
113 E MONROE
MEXICO, MO 65265

018—BARTON

ARNOLD, HERBERT M GP
1204 GULF ST
LAMAR, MO 64759
BICKEL, VERN T GS
202 W 2ND ST
LAMAR, MO 64759
CAIN, ALVIN R GP
P O BOX 572
LAMAR, MO 64759
CARROLL, THOS W GP
BOX 368
LAMAR, MO 64759
PIEDRA, H E US
P O BOX 429
LAMAR, MO 64759

026—BOONE

ABADIR, RUSHDY TR
807 STADIUM
COLUMBIA, MO 65201
ADAMS, HAROLD D PD
1480 SUTTERVILLE RD
SACRAMENTO, CA 95822
ALLEN, JOS E OTO
5813 ST CHARLES RD
COLUMBIA, MO 65201
ALLEN, ROBERT W PM
2007 S COUNTRY CLUB DR
COLUMBIA, MO 65201
ALLEN, WILLIAM C ORS
UNIV OF MISSOURI MED CT
COLUMBIA, MO 65201
ALLEN, WM C GPM
508 W BRIARWOOD LANE
COLUMBIA, MO 65201
ALYEA, JAMES O AN
2506 LYNNWOOD DRIVE
COLUMBIA, MO 65201
AMES, MARY B OS
AMBULATORY CARE VET HOSP
4801 LINWOOD BLVD.
KANSAS CITY, MO 64128
AMROMIN, GEORGE D PTH
UNIVERSITY OF MISSOURI
DEPT OF PATHOLOGY
COLUMBIA, MO 65201
ANDERSON, IVAN A PH
1600 PARKSIDE DR. #7
COLUMBIA, MO 65201
ANDERSON, PHILIP C D
807 STADIUM RD
COLUMBIA, MO 65201
ANDERSON, THOS R P
STROLLWAY CENTRE
COLUMBIA, MO 65201
ARNOLD, RICHARD C PH
814 YALE
COLUMBIA, MO 65201
ARTHAUD, J B PTH
LAB. OF CLINICAL MED.
1212 S. EUCLID AVE.
SIOUX FALLS, SD 57105
ASEL, NORMAN D D
1502 E BROADWAY
COLUMBIA, MO 65201
BAKER, ALBERT S GP
807 STADIUM ROAD
COLUMBIA, MO 65201
BAKER, GARY E PD
800 E 5TH ST.
SUITE 202
WASHINGTON, MO 63090
BAKER, JAMES M GP
1206 LONDON DR
COLUMBIA, MO 65201
BARBEE, CHAS W GS
401 N KEENE
COLUMBIA, MO 65201
BARBERO, GIULIO J PD
UNIV OF MISSOURI SCH ME
COLUMBIA, MO 65201
BASTOW, HERBERT C U
1502 E. BROADWAY
COLUMBIA, MO 65201
BAUER, JOHN H IM
UNIVERSITY OF MO MED CT
COLUMBIA, MO 65201
BECK, MARCUS R PTH
PO BOX 998
COLUMBIA, MO 65201
BIRKBY, WM F GP
1502 EAST BROADWAY
COLUMBIA, MO 65201
BLACK, SAML P NS
300 S GLENWOOD STREET
COLUMBIA, MO 65201
BLACKWELL, CHAS W DR
201 W BROADWAY
COLUMBIA, MO 65201
BLAND, HAROLD E PD
UNIVERSITY OF MO MEDICA
807 STADIUM ROAD
COLUMBIA, MO 65201
BOHAN, JAMES A GP
FAMILY MEDICAL CARE CTR
UNIVERSITY OF MO MED
COLUMBIA, MO 65201
BOURGEOIS, CURTIS H PTH
P O BOX 118
ROCHEPORT, MO 65279
BOWER, ROGER H END
UMC MED CTR
COLUMBIA, MO 65201
BRADSHAW, WM D GP
3408 B WOODRAIL TERR
COLUMBIA, MO 65201
BROOKS, CHARLES S IM
UNIVERSITY OF MO MED CT
COLUMBIA, MO 65201
BROWN, CRAIG J OPH
UNIV. OF MO.
MED CENTER
COLUMBIA, MO 65201
BRUKARDT, DIANE T IM
STUDENT HEALTH SERVICE
UNIV OF MO
COLUMBIA, MO 65201
BRUNER, CLAUDE R OPH
STAR RTE B BOX 5-HD
CAMDENTON, MO 65020
BUCHER, WILLIAM C A PTH
2703 CLARK LANE
COLUMBIA, MO 65201
BUMGARNER, JAMES E U
1504 E BROADWAY
COLUMBIA, MO 65201
BUMGARNER, ROGER W AN
BOX 975
COLUMBIA, MO 65201
BURNS, THOS W IM
310 E BRANDON RD
COLUMBIA, MO 65201
BUTT, JAMES H GE
VET ADMIN HOSP-DEPT MED
800 STADIUM DR
COLUMBIA, MO 65201
BYER, JOHN A N
UNIV SCH OF MED DEPT NE
COLUMBIA, MO 65201
BYNUM, WM R PTH
P O BOX 998
COLUMBIA, MO 65201
CALLEN, KENNETH E P
807 STADIUM RD
COLUMBIA, MO 65201
CANOY, LOLITA M GYN
EFSCH
115 BUSINESS LOOP 70 W
COLUMBIA, MO 65201
CANOY, NESTOR R TR
ELLIS FISCHEL CANCER HO
COLUMBIA, MO 65201
CARNAHAN, CHAS E PD
3801 CEDAR
COLUMBIA, MO 65201
CAROLLA, ROBERT L IM
315 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806
CARTER, RONALD D ORS
3205 LANSING AVENUE
COLUMBIA, MO 65201
CHALKLEY, JUDSON I DR
1502 E BROADWAY
BOONE COUNTY HOSP
COLUMBIA, MO 65201
CHANG, CHIL K AN
EASTGATE BUILDING
COLUMBIA, MO 65201
CHAPEL, JAMES L CHP
807 STADIUM RD
COLUMBIA, MO 65201
CHAPMAN, CHARLES L IM
401 KEENE
COLUMBIA, MO 65201
CHEEK, CHAS W OPH
3205 LANSING AVE
COLUMBIA, MO 65201
CHIASSON, EMMERSON C P
P O BOX 1077
COLUMBIA, MO 65201
COCHRAN, DONALD Q R
1502 E BROADWAY
COLUMBIA, MO 65201
COHEN, HARRY B AN
ANESTHESIOLOGISTS INC
P O BOX 975
COLUMBIA, MO 65201
COLWILL, JACK M GP
R R 5
COLUMBIA, MO 65201
COOPERSTOCK, MICHAEL S 1M
N 717 807 STADIUM RD
COLUMBIA, MO 65201
COPE, JAMES C U
ROUTE #1
ROCHEPORT, MO 65279
COWLES, ALAN L GP
FAMILY MEDICINE CLINIC
UNIVERSITY MEDICAL C
COLUMBIA, MO 65201
CRAIG, HERBERT W PM
UNIV OF MO MED CTR-PHY
COLUMBIA, MO 65201

CROUCH, JOHN A CD
401 KEENE ST.
COLUMBIA, MO 65201

CROWLEY, WM J N
11 S WILLIAM
COLUMBIA, MO 652D1

CULLEY, THOMAS S OS
UNIV OF MISSOURI MED CT
COLUMBIA, MO 65201

CUNNINGHAM, MILAMARI A AN
UNIVERSITY OF MO MED CT
COLUMBIA, MO 65201

CURTIS, JACK J CDS
CARDIOTHORACIC SURGERY
807 STADIUM BLVD.
COLUMBIA, MO 65212

DARNELL, THOS F D
9-A LAKEWOOD ESTATES
BRANSON, MO 65616

DAUGIRD, ALLEN J GP
NW 500
UNIVERSITY OF MO MED
COLUMBIA, MO 65201

DAVENPORT, SANDRA L PD
UNIVERSITY OF MO. MED. CTR.
807 STADIUM BLVD.
COLUMBIA, MO 65201

DAVIS, DAVID P
801 CRESTLAND AVENUE
COLUMBIA, MO 65201

DAVIS, WM E OTO
807 STADIUM
COLUMBIA, MO 65201

DE PAUW, ARTHUR P U
UNIV MO MED CTR
807 STADIUM
COLUMBIA, MO 65201

DENNINGHOFF, JAMES C IM
201 W BROADWAY
COLUMBIA, MO 65201

DEXHEIMER, FRANK R GS
401 KEENE
COLUMBIA, MO 65201

DEXTER, JAMES D N
UNIV OF MISSOURI SCH OF
COLUMBIA, MO 65201

DICKHAUS, DONALD W CD
UNIV OF MO MED CTR
COLUMBIA, MO 65201

DOSS, LARRY L TR
115 BUSINESS LOOP 70 W
COLUMBIA, MO 65201

EASTON, J D N
DEPT OF NEUROLOGY
UNIV OF MO MED CTR
COLUMBIA, MO 65201

EDDY, RICHARD L END
UNIV OF MO MED CEN
COLUMBIA, MO 65201

EGGERS, GEO W AN
UNIV OF MO SCHOOL MED
COLUMBIA, MO 65201

ELYASSI, HEDAYATOLLAH AN
807 STADIUM RD
COLUMBIA, MO 65201

ESTERLY, JAMES A PTH
807 STADIUM
COLUMBIA, MO 65201

FARRELL, CORINNE R
UNIV OF MO MED SCI DEPT
COLUMBIA, MO 65201

FAVAZZA, ARMANDO R P
807 STADIUM
COLUMBIA, MO 65201

FERNEAU, JAMES E OBG
401 KEENE ST
COLUMBIA, MO 65201

FOOTE, JERRY E D
1504 E BROADWAY
COLUMBIA, MO 65201

FRAKES, JAMES T GE
209 CREEK'S EDGE
BOX 20 POLK'S LANDIN
CHAPEL HILL, NC 27514

FRAZIER, ROBT E P
113 W BROADWAY
COLUMBIA, MO 65201

FREEMAN, JAMES A IM
8OONE CLINIC
401 KEENE SI
COLUMBIA, MO 65201

FRISTOE, FRANK H PTH
U MO-COLUMBIA MED CTR D
COLUMBIA, MO 65201

FRUEH, BARTLEY R OPH
909 UNIVERSITY AVENUE
COLUMBIA, MO 65201

FUCHS, GEO J OBG
1504 E BROADWAY
COLUMBIA, MO 65201

GAINES, ROBERT W ORS
3101 WOODKIRK LN
COLUMBIA, MO 65201

GAMBILL, ALICE F AN
603 MEDAVISTA
COLUMBIA, MO 65201

GARRETT, GLEN H OTO
COLUMBIA PROFESSIONAL B
COLUMBIA, MO 65201

GARROTTO, LEWIS J DR
814 HULEN DRIVE
COLUMBIA, MO 65201

GASTON, LAMONT W IM
M644 UNIV MO MED CTR
807 STADIUM RD
COLUMBIA, MO 65201

GAUNT, WM D IM
807 STADIUM RD
COLUMBIA, MO 65201

GORDON, BRUCE J AN
ANESTHESIOLOGISTS INC
P O BOX 975
COLUMBIA, MO 65201

GRAGNANI, JOHN PM
1313 BRIDGE CREEK TRAIL
ELLISVILLE, MO 63011

GRAY, JAMES E IM
DEPT OF MEDICINE
UMMC COLUMBIA
COLUMBIA, MO 65201

GRIFFIN, WM T OBG
807 STADIUM RD
COLUMBIA, MO 65201

GROSHONG, TED D PD
UNIV OF MO MED CTR
COLUMBIA, MO 65201

HAIBACH, HELMUT R
H S TRUMAN MEMORIAL VA
COLUMBIA, MO 65201

HALL, DAVID G OBG
8D7 STADIUM RD
COLUMBIA, MO 65201

HARDWICKE, HENRY M IM
ASHLAND, MO 65010

HARRIS, HUGH S GS
801 COWAN DR
COLUMBIA, MO 65201

HARRIS, ROBT J PD
2505 E BROADWAY
COLUMBIA, MO 65201

HARRISON, WINSTON E U
1220 SUNSET DR
COLUMBIA, MO 65201

HARRY, BRUCE E P
DEPT OF PSYCHIATRY
UNIV OF MISSOURI MED
COLUMBIA, MO 65201

HART, WM M OPH
404 PORTLAND ST
EYE RES FNDN
COLUMBIA, MO 65201

HAW, MARVIN T IM
1807 JACKSON ST
COLUMBIA, MO 65201

HAWKINS, JAMES C GP
806 STADIUM
COLUMBIA, MO 65201

HEIMBERG, MURRAY OS
MISSOURI SCH OF MED-PHA
COLUMBIA, MO 65201

HEIMBURGER, ELIZABETH M P
807 STADIUM
COLUMBIA, MO 65201

HEIMBURGER, RICHARD A PS
1504 EAST BROADWAY
COLUMBIA, MO 65201

HENRY, LAWRENCE D PTH
2703 CLARK LA
COLUMBIA, MO 65201

HENSTORF, HAROLD R R
UNIV OF MO MED CTR DEPT
COLUMBIA, MO 65201

HENZEL, JOHN H GS
1502-04 E. BROADWAY
COLUMBIA, MO 65201

HICKCOX, JOHN P ORS
3205 LANSING AVE
COLUMBIA, MO 65201

HOFMEISTER, ROGER W GP
807 STADIUM
COLUMBIA, MO 65201

HOLEKAMP, TIMOTHY OPH
3205 LANSING AVE.
COLUMBIA, MO 65201

HOLMES, RICHARD A R
807 STADIUM RD
COLUMBIA, MO 65201

HOWITT, HARVEY F OPH
1850 NE 198 TERRACE
MIAMI, FL 33179

HOYT, TERRY S DR
1012 MAPLEWOOD DR.
COLUMBIA, MO 65201

HUBBELL, IRA G AN
302 MC NAB
COLUMBIA, MO 65201

HURST, DANIEL J PUD
DEPT OF MEDICINE
MO MEDICAL CENTER
COLUMBIA, MO 65201

HUSAIN, SYED A CHP
807 STADIUM
COLUMBIA, MO 65201

HYATT, ROBT W OS
113 W BROAOWAY
COLUMBIA, MO 65201

IDE, CARL H OPH
1008 BOURN AVE
COLUMBIA, MO 65201

IRVIN, WILLIAM S IM
OEPT OF MEDICINE
UNIV OF MO MEO CTR
COLUMBIA, MO 65201

JACKSON, ROBT L PD
113 W BROADWAY
COLUMBIA, MO 65201

JAMES, ELIZABETH J PD
UNIV MO MED CTR DEPT PD
COLUMBIA, MO 65201

JAMES, RONALD C IM
610 W BLVD SOUTH
COLUMBIA, MO 65201

JOHNSON, RICHARD E PTH
BOONE COUNTY HOSP
COLUMBIA, MO 65201

JOHNSTON, WM D GS
E FISHEL CANCER HOSP
COLUMBIA, MO 65201

JONES, ROBERT S P
803 STADIUM RD
COLUMBIA, MO 65201

JOSEPH, DONALD J OTO
UNIV MO SCH OF MED
COLUMBIA, MO 65201

KAPLAN, MICHAEL F PS
1409 OVERHILL ROAD
COLUMBIA, MO 65201

KARDINAL, CARL G IM
E FISCHEL STATE CANCER
COLUMBIA, MO 65201

KAYS, KENNETH M R
1502 E BROADWAY
COLUMBIA, MO 65201

KEITHLY, DENNIS J GP
1516 TOWNE DR
ELLISVILLE, MO 63011

KEOWN, KENNETH K AN
UNIV OF MO SHCOOL MED
COLUMBIA, MO 65201

KING, ROBERT J U
1502 BROADWAY
COLUMBIA, MO 65201

KLACHKO, DAVID M IM
DEPT MED
M712MED SCI
COLUMBIA, MO 65201

KUBIN, MILFORD T IM
541-17 MILE DR
PACIFIC GROVE, CA 93950

LABABIDI, ZUHDI A PDC
UNIV OF MO COLL OF MED
COLUMBIA, MO 652D1

LACHANCE, J A GP
110 W SNEED AVE
CENTRALIA, MO 65240

LADENSON, ROLAND P IM
16 S 10TH ST
COLUMBIA, MO 65201

LAMBERTI, JOS W P
UNIV OF MISSOURI MED CT
COLUMBIA, MO 65201

LAMPTON, LAWRENCE M PUD
807 STADIUM
COLUMBIA, MO 65201

LANDHUIS, LEO R OPH
3205 LANSING AVE
COLUMBIA, MO 65201

LEECH, CHAS A GP
1504 E BROADWAY
COLUMBIA, MO 65201

LEEPER, CLAUDE K PTH
UNIV OF MO MED CTR DEPT
COLUMBIA, MO 65201

LEEPER, SIDLEE W IM
1504 E BROADWAY
COLUMBIA, MO 65201

LINDBERG, DONALD A OS
ROUTE 4
COLUMBIA, MO 65201

LITTON, LYNN O ORS
3205 LANSING AVE
COLUMBIA, MO 65201

LITWILLER, RAYMOND W GP
1312 W BROADWAY
COLUMBIA, MO 65201

LLORENS, ALFRED S OBG
807 STADIUM RD
UMMC
COLUMBIA, MO 65201

LOBECK, CHARLES C PD
RR 4
COLUMBIA, MO 65201

LODWICK, GWILYM S R
911 LA GRANGE
COLUMBIA, MO 65201

LOGUE, JOHN T IM
1504 E BROADWAY ST
COLUMBIA, MO 65201

LOHMAR, ROLAND E IM
113 W BROADWAY
COLUMBIA, MO 65201

MALEK-AHMADI, PARVIZ CHP
201 MID-MISSOURI HEALTH
COLUMBIA, MO 65201

MALTBY, JAMES D R
N 207 MEDICAL SCIENCES
UMC
COLUMBIA, MO 65201

MARIENFELD, CARL J 807 STADIUM COLUMBIA, MO 65201	PH
MARKIVEE, CARROLL R 807 STADIUM COLUMBIA, MO 65201	R
MC CORD, E S UNIV MED CENTER DEPT AN COLUMBIA, MO 65201	AN
MC DAVID, ROBERT E 203 W BROADWAY COLUMBIA, MO 65201	OBG
MC ELROY, GLENN L 3205 LANSING AVE COLUMBIA, MO 65201	ORS
MECHLIN, DAVID C 3205 LANSING AVE. COLUMBIA, MO 65201	OTO
MEMULA, NARAYANAGOUD 115 BUSINESS LOOP 70 WEST COLUMBIA, MO 65201	TR
METZLER, MICHAEL H UNIV OF MO MED CTR COLUMBIA, MO 65201	GS
MEYER, JOHN C 401 KEENE COLUMBIA, MO 65201	PD
MEZOFF, JOHN M UNIV OF MO MED CTR COLUMBIA, MO 65201	OPH
MILES, JUDITH H DEPT. OF CHILD HEALTH UNIV. OF MO. MED. CTR. COLUMBIA, MO 65201	PD
MILLER, LE R 1502 E BROADWAY COLUMBIA, MO 65201	GP
MILLIKAN, LARRY E UNIVERSITY HOSP DEPT DE COLUMBIA, MO 65201	D
MITCHELL, FRANKLIN L 2208 DANFORT CT COLUMBIA, MO 65201	GS
MITCHELL, LYNN D 401 KEENE COLUMBIA, MO 65201	IM
MONROE, CARROLL D 803 STADIUM RD COLUMBIA, MO 65201	P
MONTIE, JOS E UNIV OF MO MED CTR COLUMBIA, MO 65201	U
MOON, AGNES H RUSK REHABILITATION CEN COLUMBIA, MO 65201	PM
MORANVILLE, BENEDICT A 1504 E BROADWAY COLUMBIA, MO 65201	GP
MORRIS, ALAN O UNIVERSITY OF MO MED CT 807 STADIUM RD COLUMBIA, MO 65201	IM
MOSBY, LARRY D 107 E SRANDON RD COLUMBIA, MO 65201	PTH
NAVARRO, MANUEL I U MO-COLUMBIA MED CTR D COLUMBIA, MO 65201	R
NICHOLS, WALTER K UN OF MO MED CTR DPT GS COLUMBIA, MO 65201	GS
NICOLAUS, WILLIAM B 2 WOLFE GRADE KENTFIELD, CA 94904	OM
NIEUWENHUIZEN, MAARTEN 3916 FAUROT DR COLUMBIA, MO 65201	P
NOLPH, GEORGIA J 801 WESTPORT DRIVE COLUMBIA, MO 65201	GP
NOLPH, KARL D DIV OF NEPHROLOGY DEPT OF MED COLUMBIA, MO 65201	IM
OESTREICH, ALAN E UNIV MO MED CTR-N-217 COLUMBIA, MO 65201	R
ORTH, OLIVER G 11 S WILLIAMS ST COLUMBIA, MO 65201	NS
OSKINS, PERRY B PATHOLOGY DEPT UMMC COLUMBIA, MO 65201	PTH
OVERHOLSER, MILTON D 807 STADIUM ROAD COLUMBIA, MO 65201	OS
OXENHANDLER, RONALD W M-646 MEDICAL SCIENCE B COLUMBIA, MO 65201	PTH
PARKER, BRENT M DIRECTORS OFFICE 807 STADIUM COLUMBIA, MO 65201	CD
PARRAGA, HUMBERTO C 803 STADIUM RD. COLUMBIA, MO 65201	CHP
PAYNE, DAVID E 1901 RIDGEMONT COLUMBIA, MO 65201	D
PAYNE, JOHN W 3205 LANSING AVE COLUMBIA, MO 65201	ORS
PEARLMAN, MILTON H UNIV. OF MO., MED. CTR. COLUMBIA, MO 65201	OTO
PEARMAN, CARL C 1414 PICKFORD COLUMBIA, MO 65201	OBG
PEREZ-MESA, CARLOS M ELLIS FISCHEL CANCER HO COLUMBIA, MO 65201	PTH
PERRY, MICHAEL C 807 STADIUM RD COLUMBIA, MO 65201	IM
PETERSON, CHAS R HOWARD A RUSK REHAB CEN ROOM 132 COLUMBIA, MO 65201	PM
PFEFER, LELAND U 1504 E BROADWAY COLUMBIA, MO 65201	IM
PICKARD, CLARENCE M 113 W BROADWAY COLUMBIA, MO 65201	IM
PICKENS, JAMES M UNIV OF MO MED CTR DEPT COLUMBIA, MO 65201	PO
PINGELTON, WM B 113 W BROADWAY COLUMBIA, MO 65201	OBG
POLITTE, LENARD L 401 KEENE ST COLUMBIA, MO 65201	CD
PUCKETT, CHAS L UNIV OF MO MED CTR M348 MED CTR 807 STA COLUMBIA, MO 65201	PS
PULLIAM, MORRIS W DEPT NEURO SURGERY 807 STADIUM RD COLUMBIA, MO 65201	NS
QUAYLE, WILLIAM H 3205 LANSING AVE COLUMBIA, MO 65201	OPH
RALL, KENNETH L 1121 DANFORTH DRIVE COLUMBIA, MO 65201	R
REYNOLDS, JAMES O 807 STADIUM COLUMBIA, MO 65201	IM
RIDENHOUR, CLARENCE E ROUTE 1 CEDAR GROVE COLUMBIA, MO 65201	GS
RIKLI, ARTHUR E 4003 FAUROT DR COLUMBIA, MO 65201	GPM
RINK, RICHARD A HARRY S TRUMAN MEM VETS 800 STADIUM RD COLUMBIA, MO 65201	AN
RODGERS, ELRIE P BOX 993 COLUMBIA, MO 65201	IM
ROGERS, WALLACE A UNIV MO MED CTR DPT PTH COLUMBIA, MO 65201	PTH
ROSENHOLTZ, MITCHELL J 103 LONGFELLOW LANE COLUMBIA, MO 65201	PTH
ROSS, GILBERT 807 STADUIM COLUMBIA, MO 65201	U
ROYER, JERRY A 807 STADIUM COLUMBIA, MO 65201	GP
RUSSELL, GARTH S BOX D COLUMBIA, MO 65201	ORS
SAAB, SALIM B UNIV OF MO MED CTR COLUMBIA, MO 65201	TS
SANDER, PAUL D W350 DEPT. ANES 807 STADIUM RD. COLUMBIA, MO 65201	AN
SANDERS, HAROLD L 1502 E BROADWAY COLUMBIA, MO 65201	DR
SANDOCK, KENNETH N217 MED-SCI UNIV OF MISSOURI HOS COLUMBIA, MO 65201	R
SCHEWE, ELMER J 3205 LANSING COLUMBIA, MO 65201	GS
SCHRAGE, JON P M-749 UNIVERSITY MO MED COLUMBIA, MO 65201	IM
SEE, WM B 1504 E BROADWAY COLUMBIA, MO 65201	OBG
SHAHEEN, ELEANOR UNIV MO MED CTR-PED DPT COLUMBIA, MO 65201	PD
SHALEN, PHILIP R 1502 E BROADWAY COLUMBIA, MO 65201	R
SHAPERO, JAMES A 1301 FIELDCREST COLUMBIA, MO 65201	P
SHERMAN, DAVID DEPT OF NEUROLOGY UNIV OF MO MED CTR COLUMBIA, MO 65201	N
SIGHTS, WARREN P 807 STADIUM COLUMBIA, MO 65201	N
SILVER, DONALD 807 STADIUM COLUMBIA, MO 65201	GS
SILVERS, ROBT G 610 W STEWART RD COLUMBIA, MO 65201	N
SIMONOS, JOHN F 807 STADIUM COLUMBIA, MO 65201	CHP
SMITH, JASON N 701 WEST BLVD S COLUMBIA, MO 65201	IM
SMITH, JOE R 1504 E BROADWAY COLUMBIA, MO 65201	OPH
SOHA, JOSEPH J 114 ARBOR DRIVE COLUMBIA, MO 65201	DR
SOMERS, JOHN E 11 S WILLIAMS ST COLUMBIA, MO 65201	N
SORKIN, MICHAEL I TD 4-E 226 UNIVERSITY OF MO MED COLUMBIA, MO 65201	IM
SOSEBEE, LEE A 3205 LANSING AVE COLUMBIA, MO 65201	ORS
SPURGEON, MILO J 404 EDGEWOOD COLUMBIA, MO 65201	AN
STABENOW, DAVID L UNIV OF MO MED CTR COLUMBIA, MO 65201	D
STEPHENSON, HUGH E UNIV OF MO SCHOOL MED COLUMBIA, MO 65201	TS
STEWART, WELLINGTON B COL OF MED DEPT PATH COLUMBIA, MO 65201	PTH
STOY, ROBT P 201 W BROADWAY COLUMBIA, MO 65201	GS
STRADFORD, H T 1444 S EL CHAPARRAL AVE COLUMBIA, MO 65201	ORS
TAYLOR, HENRY M UNIV OF MO MED CTR COLUMBIA, MO 65201	IM
TEMPLER, JERRY W 807 STADIUM COLUMBIA, MO 65201	OTO
TERRY, BOYD E UNIV OF MO HOSP DEPT SU COLUMBIA, MO 65201	GS
THOMAS, HORACE E 1502 E BROADWAY COLUMBIA, MO 65201	GS
THOMAS, JAMES R 3205 LANSING COLUMBIA, MO 65201	OTO
THOMAS, ROBERT M 3205 LANSING AVE AT KEE COLUMBIA, MO 65201	OTO
TINSLEY, JOHN C 16 S 10TH ST COLUMBIA, MO 65201	IM
TRUMBOWER, WM D 1026 SHERIDAN RD. WATERLOO, IA 50701	OBG
TULLY, RICHARD J 807 STADIUM RD COLUMBIA, MO 65201	DR
VAN DERVOORT, ROBT L 401 KEENE ST COLUMBIA, MO 65201	PD
VAN STONE, JOHN C TD 4-E UNIV OF MO MED CTR COLUMBIA, MO 65201	IM
VISOT, LUIS R RUSK REHAB. CTR. COLUMBIA, MO 65201	PM
VOGEL, CURT M 3707 WOODRIDGE CT COLUMBIA, MO 65201	GS
WAGGONER, CHAS M 201 W BROADWAY COLUMBIA, MO 65201	R
WAKERLIN, GEO E 2120 PACIFIC AVE SAN FRANCISCO, CA 94115	OS
WALTERS, LAURA 11 S WILLIAM COLUMBIA, MO 65201	D
WASHINGTON, EDWARD L 1209 PARKRIDGE DR. COLUMBIA, MO 65201	PD

WATSON, TREVOR F OBG
1504 E BROADWAY
COLUMBIA, MO 65201
WATTS, CLARK C NS
807 STADIUM
COLUMBIA, MO 65201
WEIGEL, JAMES W GP
STUDENT HEALTH
6TH STREET
COLUMBIA, MO 65201
WEISS, JAMES M P
UNIV OF MO MED CENTER
COLUMBIA, MO 65201
WERNER, HAROLD V IM
UNIV OF MO MEDICAL CENT
COLUMBIA, MO 65201
WHITTIER, FREDERICK C IM
RR #5
COUNTRYSHIRE ESTATES
COLUMBIA, MO 65201
WIGGINS, ROLAND L IM
408 N GARTH ST
COLUMBIA, MO 65201
WILLIAMS, ANDREW F OBG
203 W BROADWAY
COLUMBIA, MO 65201
WILSON, GEO P R
P O BOX 644
COLUMBIA, MO 65201
WILSON, JOHN E OBG
401 KEENE ST
COLUMBIA, MO 65201
WINDMILLER, MYRL E GS
1504 E BROADWAY
COLUMBIA, MO 65201
WINNACKER, JOHN L IM
467 VA HOSPITAL
COLUMBIA, MO 65201
WOODRUFF, CALVIN W PD
807 STADIUM ROAD
COLUMBIA, MO 65201
YARBRO, JOHN W IM
2604 LUAN COURT
COLUMBIA, MO 65201
YEAGER, HELEN E PD
807 STADIUM
COLUMBIA, MO 65201
YESUS, YOHANNES W PTH
807 STADIUM RD
COLUMBIA, MO 65201

030—BUCHANAN

ACUFF, R P R
702 JULE ST
ST JOSEPH, MO 64501
AHAD, ABDUL P
BOX 263 3400 FREDERICK
ST JOSEPH, MO 64502
AMES, WM H CD
902 EDMOND ST
ST JOSEPH, MO 64501
ANDRES, EDWARD H GS
902 EDMOND
ST JOSEPH, MO 64502
APARICIO, SAMUEL E OBG
P.O. BOX 394 FAIRLIEGH STA.
ST JOSEPH, MO 64506
BALLARD, DEWEY P IM
THOMPSON BRUMM KNEPPER
ST JOSEPH, MO 64502
BARTULICA, NICHOLAS P
3400 FREDERICK
ST JOSEPH, MO 64502
BECK, PAUL M OPH
409 KIRKPATRICK BLDG
ST JOSEPH, MO 64501
BEHELER, EDWARD M GS
422 N 7TH ST
ST JOSEPH, MO 64501
BENSON, SCOTT C IM
P O BOX #4538
MESA, AZ 85201
BERNEY, FRANCIS J OTO
1225 N 10TH ST
ST JOSEPH, MO 64501
BRENNAN, RICAHRD J ORS
1335 VILLAGE DR
ST JOSEPH, MO 64506
BRISTOW, ROBT B U
416 N 7TH
ST JOSEPH, MO 64501
BROWN, MERLIN D GP
510 FRANCIS
PIONEER BLDG SUITE 2
ST JOSEPH, MO 64501
BRYANT, SYDNEY L IM
902 EDMOND ST
ST JOSEPH, MO 64502
BUTLER, ELZA F OM
902 EDMOND ST
ST JOSEPH, MO 64502
CARPENTER, GEO T IM
902 EDMOND ST
ST JOSEPH, MO 64502
CERZA, ROBERT F AN
11 LAKELAND ESTATES
ST. JOSEPH, MO 64506
CHALLENER, WM A IM
902 EDMOND ST
ST JOSEPH, MO 64502
CHRIST, MARTIN H A
1402 FARAON ST
ST JOSEPH, MO 64501
CORDER, ROBT L OBG
510 FRANCIS
ST JOSEPH, MO 64501
COX, JOHN P P
902 EDMOND ST
ST JOSEPH, MO 64502
CRAIG, OWEN W GP
KIRKPATRICK BLDG
ST JOSEPH, MO 64501
CRAIG, RICHARD O GS
510 FRANCIS PL
ST JOSEPH, MO 64501
DAY, ROMNEY M U
1410 HIGHLAND
MC ALLEN, TX 78501
DECANINI, JESUS M P
P O BOX 11
ST JOSEPH, MO 64502
DU MONT, CLEMENT C GP
1905 FRANCIS ST
ST JOSEPH, MO 64501
DYER, GARY A D
1325 VILLAGE DR
ST JOSEPH, MO 64506
ESCOBAR, NELSON G NS
315 N. 10TH
ST JOSEPH, MO 64501
FERNANDEZ, FERNANDO OS
1341 VILLAGE DR
ST JOSEPH, MO 64506
FISCHER, MARTIN J TS
902 EDMOND ST
ST JOSEPH, MO 64502
FISHER, JOS L R
7TH AND JULE
ST JOSEPH, MO 64501
FORMAN, GEO W P
2412 ASHLAND
ST JOSEPH, MO 64506
FOX, GERALD E PTH
METHODIST HOSP DEPT PAT
ST JOSEPH, MO 64501
FUSON, LEVI H IM
502 S 6TH ST
SAVANNAH, MO 64485
GARRIDO, DANTE O N
315 N. TENTH ST.
ST. JOSEPH, MO 64506
GARRISON, DAVID L OBG
902 EDMOND ST
ST JOSEPH, MO 64502
GHOSH, RANENDRA B P
3400 FREDERICK
ST JOSEPH, MO 64501
GONDRING, WILLIAM H ORS
1335 VILLAGE DR
ST JOSEPH, MO 64506
GRANT, CLAUDE S GP
2726 SUBLETTE WAY
ST JOSEPH, MO 64506
GRIMES, MANNING E GP
KIRKPATRICK BLDG
ST JOSEPH, MO 64501
GUNTER, JOE S U
902 EDMOND
ST JOSEPH, MO 64502
HANDLER, ERIC GP
KIRPATRICK BLDG
ST JOSEPH, MO 64501
HARNER, CASPER G D
902 EDMOND ST
ST JOSEPH, MO 64502
HAYES, PAUL W P
610 N NOYES BLVD
ST JOSEPH, MO 64506
HERMAN, ALLEN I IM
510 FRANCIS ST STE 314
ST JOSEPH, MO 64501
HERMANN, CHARLES G PTH
3608 E COLONY SQUARE
ST JOSEPH, MO 64506
HOWDEN, THOS L IM
2723 FRANCIS ST
ST JOSEPH, MO 64501
HUGHES, JUDSON M OM
3306 JENNIFER LANE
ST JOSEPH, MO 64506
IDE, LUCIEN W IM
902 EDMOND AVE
ST JOSEPH, MO 64502
INOCENCIO, EDDIE C OTO
902 EDMOND ST
ST JOSEPH, MO 64502
JIMENEZ, JOSE P
2222 EDGEWATER
ST JOSEPH, MO 64502
KIEKHAEFER, THEODORE C N GP
EVERGREEN ESTATES #2
R R #2
ST JOSEPH, MO 64505
KIRUBAKARAN, VELLORE R P
ST. JOSEPH STATE HOSP.
923 POWELL ST.
ST. JOSEPH, MO 64501
KLINE, CARLYN M GP
17 STONECREST
ST JOSEPH, MO 64506
KLINE, EDMUND W OBG
510 FRANCIS
ST JOSEPH, MO 64501
KNEPPER, PAUL A GS
2002 ASHLAND AVE
ST JOSEPH, MO 64506
KULOWSKI, JACOB ORS
5106 STONECREST TERR
ST JOSEPH, MO 64506
LEE, CARLETON H A
4104 ST JOSEPH AVE
ST JOSEPH, MO 64505
LEHMAN, PHILIP C ORS
1331 VILLAGE DR
ST JOSEPH, MO 64506
MAGINN, RICHARD L GP
702 JULE ST
ST JOSEPH, MO 64501
MARSTON, FREDERICK J OBG
902 EDMOND ST
ST JOSEPH, MO 64502
MARTIN, JOHN N U
416 N 7TH ST
ST JOSEPH, MO 64501
MC DANIEL, JOHN R GS
902 EDMOND ST
ST JOSEPH, MO 64502
MC DONALD, WALLACE US
29 RIDGELAND
ST JOSEPH, MO 64505
MC DONALD, WILBUR P GS
301 N 8TH ST
ST JOSEPH, MO 64501
MC MILLEN, JAMES J IM
900 N BELT
ST JOSEPH, MO 64506
MERIWETHER, DON R AN
902 EDMOND ST
ST JOSEPH, MO 64502
MINTON, ROBT S OPH
403 MIDDLETON
ST JOSEPH, MO 64505
MOEN, BERWYN H OTO
902 EDMOND ST
ST JOSEPH, MO 64502
MONTA, MANDE D PTH
METHODIST MED CTR
ST JOSEPH, MO 64501
MORSE, JOHN P ORS
541 FRANCIS
ST. JOSEPH, MO 64501
MORSE, MARVIN W PTH
2702 FARON ST
ST JOSEPH, MO 64501
MOTHERSHEAD, JOHN L US
2603 FREDERICK AVE
ST JOSEPH, MO 64506
MUENCH, ALBERT H PH
412 N 25TH
ST JOSEPH, MO 64501
MULLICAN, CHAS N IM
510 FRANCIS ST
SUITE 324
ST JOSEPH, MO 64501
MURPHY, JAMES A OPH
3201 ASHLAND AVE.
ST JOSEPH, MO 64506
NESS, CARL K AN
8 LINDENWOOD LANE
ST JOSEPH, MO 64505
O'CONNOR, WM B D
510 FRANCIS ST
ST JOSEPH, MO 64501
PACULDO, NORA N P
4410 PEARL ST
EUGENE, OR 97405
PARTAMIAN, KRIKOR U
9TH & EDMOND
ST JOSEPH, MO 64502
PAULSON, GORDON S IM
1305 VILLAGE DR.
ST JOSEPH, MO 64506
PETERSEN, HAROLD E PD
2902 FREDERICK AVE
ST JOSEPH, MO 64506
PFEFFER, ROBT I OBG
1915 N 29TH ST
ST JOSEPH, MO 64506
PIFER, LAWRENCE H GP
925 5TH AVE
ST JOSEPH, MO 64505
POTTER, CARYL A IM
324 PIONEER BLDG
ST JOSEPH, MO 64501
PROKOP, JOS R US
29 STONECREST
ST JOSEPH, MO 64506
RAPHEL, JOSE GP
1111 N 49TH TERR
ST JOSEPH, MO 64506
REDMOND, WM S GP
CORBY BLDG
ST JOSEPH, MO 64501
ROBERTS, PHYLLIS L PD
2607 CORNELL AVE
ST JOSEPH, MO 64506
ROGERS, JOHN T GP
2502 ASHLAND AVE
ST JOSEPH, MO 64506

ROSENTHAL, IRWIN I GP
ST JOSEPH STATE HOSP
BOX 263
ST JOSEPH, MO 64502
RYAN, JOHN H GS
2901 LOVER LN
ST JOSEPH, MO 64506
SHAH, NARENDRA AN
THOMPSON BRUMM & KNEPPE
902 EDMOND ST
ST JOSEPH, MO 64502
SHEVLIN, CHAS F PD
902 EDMOND ST
ST JOSEPH, MO 64502
SILLIMAN, YORK E PTH
2715 FRANCIS
ST JOSEPH, MO 64501
SKLENAR, DONALD E GP
222 ILLINOIS
ST. JOSEPH, MO 64504
SPURGAT, ROBERT M PUD
510 FRANCIS ST
ST JOSEPH, MO 64501
STALLARD, DONALD J IM
902 EDMOND ST
ST JOSEPH, MO 64502
STEVENS, EDWARD M DR
702 JULE
ST JOSEPH, MO 64504
STUBER, ROBT R CD
900 N BELT HWY
ST JOSEPH, MO 64506
THOLE, JOHN J OBG
THOMPSON BRUMM KNEPPER
ST JOSEPH, MO 64502
THOMPSON, FREDERICK G PD
2714 ASHLAND AVE
ST JOSEPH, MO 64506
TOBIN, ROBT F OPH
3201 ASHLAND AVE.
ST JOSEPH, MO 64506
VALERA, SALVADOR S P
4110 W HAVERILL DR
ST JOSEPH, MO 64506
WADLOW, ERNEST E OBG
1401 N 43RD STREET
ST JOSEPH, MO 64506
WAGGONER, SHARON E GP
301 ILLINOIS AVE
ST JOSEPH, MO 64504
WEED, RANDAL R
702 JULES ST
ST JOSEPH, MO 64501
WEINAND, ERNEST E GS
902 EDMOND ST
ST JOSEPH, MO 64502
WHITSELL, ORA E OPH
802 N 23RD ST
ST JOSEPH, MO 64506
WILLMAN, CHAS R GS
2216 HIGHLY
ST JOSEPH, MO 64506
WILLUMSEN, HENRY C OBG
2209 EUGENE FIELD AVENUE
ST JOSEPH, MO 64505
WINDSOR, DAVID G P
RR #1
ROSENDALE, MO 64483
WOLANSKI, EUGENE G IM
902 EDMOND ST
ST JOSEPH, MO 64502
YOUNG, THOS J OPH
3201 ASHLAND AVE
ST JOSEPH, MO 64506

034—BUTLER-WAYNE-RIPLEY-CARTER

ANDRUS, DON L GS
VA HOSPITAL
POPLAR BLUFF, MO 63901
BARBOUR, MARVIN R GP
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
BASKURT, MEHMET V R
VA HOSPITAL DEPT OF RAD
POPLAR BLUFF, MO 63901
BIGGS, FRED J GP
808 N MAIN ST
POPLAR BLUFF, MO 63901
BROOKRESON, ALTON D GP
#1 HONEYSUCKLE LANE
POPLAR BLUFF, MO 63901
CALDWELL, FRED GP
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
CAMP, RICHARD V US
111 ASH ST
CAMPBELL, MO 63933
CANLAS, EMILIO M R
P O BOX 1009
POPLAR BLUFF, MO 63901
CARLSON, ELMER C OBG
623 PINE ST
POPLAR BLUFF, MO 63901
CHAND, NAZAR PD
666 LESTER
POPLAR BLUFF, MO 63901
CHRISTY, JOHN P GS
666 LESTER ST
POPLAR BLUFF, MO 63901
CONGER, WILLIAM R GP
KNEIBERT CLINIC
LESTER STREET
POPLAR BLUFF, MO 63901
DEMEO, ROBERT R OPH
1116 81ST STREET
BROOKLYN, NY 11228
DUNCAN, ROLIN B GP
666 LESTER
POPLAR BLUFF, MO 63901
ENGELHARDT, ROBT C AN
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
ESPINOSA, TOMAS P
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
FARRIS, LARRY E CLP
1980 NO. WESTWOOD
POPLAR BLUFF, MO 63901
FRASER, RICHARD A IM
621 PINE ST
POPLAR BLUFF, MO 63901
GERNSTETTER, S L ORS
P O BOX 337
POPLAR BLUFF, MO 63901
HANSBROUGH, EUGENE T GS
1502 LURKYN
POPLAR BLUFF, MO 63901
HARWELL, JAMES L OS
2149 SUNSHINE
COLUMBUS APT 204C
SPRINGFIELD, MO 65804
HECKER, JOS E GP
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
HENRICKSON, W E GP
HENRICKSON CLINIC
POPLAR BLUFF, MO 63901
HOJA, WITOLD A OBG
1111 MANSION MALL DR
POPLAR BLUFF, MO 63901
HUNT, JOHN L GP
WILCOX RO
BOX 56
POPLAR BLUFF, MO 63901
JACKMAN, ROGER L CD
RT 6 BOX 901
POPLAR BLUFF, MO 63901
KIM, CHUL IM
217 OAK
POPLAR BLUFF, MO 63901
KNEIBERT, FRED L GP
666 LESTER
P O BOX 220
POPLAR BLUFF, MO 63901
KWOUN, SOUNG GS
217 OAK STREET
POPLAR BLUFF, MO 63901
LAATSCH, ROBT H GP
1333 MEADOW LN
POPLAR BLUFF, MO 63901
LADYMAN, GEO H R
623 PINE
POPLAR BLUFF, MO 63901
LASETER, MICHAEL IM
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
LEROUX, GENE H US
204 SUMMIT
DONIPHAN, MO 63935
LESTMANN, HENRY E GP
RT1 BOX 104B
FAIRDEALING, MO 63939
LOUGHEAD, JOHN R OTO
1201 LURLYN AVE
POPLAR BLUFF, MO 63901
MACAULEY, BERNARD J OPH
P O BOX 238
DONIPHAN, MO 63935
MADDURI, ARUNA D OBG
666 LESTER
POPLAR BLUFF, MO 63901
MAOOURI, SIVAPRASAO D U
666 LESTER
POPLAR BLUFF, MO 63901
MATHEY, JOSEPH W GP
330 N SECOND
POPLAR BLUFF, MO 63901
MAY, ALBERT L GS
330 N 2ND ST
POPLAR BLUFF, MO 63901
MC ANELLY, GEORGE C A U
217 OAK STREET
POPLAR BLUFF, MO 63901
MC LANE, JERRY F OBG
OAKHAVEN WOMEN'S CLINIC
1111 MANSION MALL DR
POPLAR BLUFF, MO 63901
MILLER, DAVID V IM
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
NAGY, A L P
POPLAR BLUFF HOSP
POPLAR BLUFF, MO 63901
PARKER, ARTHUR C PD
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
PLUNKETT, LITTLETON J GP
330 N 2ND STREET
POPLAR BLUFF, MO 63901
RAMIREZ, RICARDO M PTH
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
REDDY, ABBIAH N US
666 LESTER ST
POPLAR BLUFF, MO 63901
REDOY, SARVOTHAM K GS
666 LESTER ST
POPLAR BLUFF, MO 63901
ROBERTSON, WM D GP
MC PHEETERS CLINIC
POPLAR BLUFF, MO 63901
RUFF, T E U
1411 ROSEDALE
POPLAR BLUFF, MO 63901
SPARGER, CHARLES F TS
HENRICKSON CLINIC BLDG
217 OAK ST
POPLAR BLUFF, MO 63901
STUBBLEFIELO, CALVIN F IM
2547 HOLLYHOCK
GERMANTOWN, TN 38138
SUVAN, R PD
107 OAK STREET
POPLAR BLUFF, MO 63901
TILL, BENNIE N GP
666 LESTER ST
POPLAR BLUFF, MO 63901
TINSLEY, AUSTIN R GP
2ND AND OAK STREET
POPLAR BLUFF, MO 63901
TRAXEL, WM L OPH
623 PINE BLVD
POPLAR BLUFF, MO 63901
TUMA, ARTHUR T R
215 OAK STREET
POPLAR BLUFF, MO 63901
TURNER, KIRBY L GP
623 PINE
POPLAR BLUFF, MO 63901
VARMA, DEVENDRA K IM
2506 N MAIN
POPLAR BLUFF, MO 63901
WHITE, BARRY B GP
330 N 2ND
POPLAR BLUFF, MO 63901
WOOD, THOS O GP
666 LESTER KNEIBERT CLINIC
POPLAR BLUFF, MO 63901
WOOOSON, WILLIAM H ORS
VA MED. CTR.
POPLAR BLUFF, MO 63901
YOUNG, WILLIAM C
KNEIBERT CLINIC
POPLAR BLUFF, MO 63901

038—CALLAWAY

BRESHEARS, EDWIN D FP
820 JEFFERSON
FULTON, MO 65251
BROWN, JOHN J GS
1304 VINE ST
FULTON, MO 65251
BROWN, KATHERINE S AN
1304 VINE ST
FULTON, MO 65251
CRAFT, GEORGE A GP
BOX 456
FULTON, MO 65251
DOMKE, HERBERT R PH
221 W HIGH ST
JEFFERSON CITY, MO 65101
DURST, HENRY GP
WESTGATE BLDG
5TH & JEFFERSON
FULTON, MO 65251
GISH, E R GP
5 E 5TH ST
FULTON, MO 65251
GROCE, GEO O GP
820 JEFFERSON ST
FULTON, MO 65251
HAN, JUNG H P
EAST FIFTH STREET
FULTON, MO 65251
HILL, JAMES E GP
820 JEFFERSON ST
FULTON, MO 65251
JACKSON, VERNON B OPH
STATE HOSPITAL #1
FULTON, MO 65251
OSBOURN, RICHARD A GP
82D8 JEFFERSON
FULTON, MO 65251
PARULEKAR, DILIP G GS
506 JEFFERSON ST.
FULTON, MO 65251
PETERSON, DONALD B P
1 COUNTRY CLUB DR
FULTON, MO 65251
PONCE, ARMANDO B P
FULTON STATE HOSPITAL
FULTON, MO 65251
RITTERBUSCH, JAMES K GS
STATE HOSP #1
FULTON, MO 65251
SYDOW, HENRY A GP
10 W 6TH ST
FULTON, MO 65251

WOOD, GEO F GP
1700 PLAZA DR
FULTON, MO 65251

042—CAPE GIRARDEAU

ADAMS, RILEY R AN
30 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
ASHER, KENNETT GP
BROADRIDGE ROAD
JACKSON, MO 63755
ASHLEY, HUGH V GP
425 FRANKLIN ST
CAPE GIRARDEAU, MO 63701
BAHN, CHAS F GE
14 DOCTOR'S PARK
CAPE GIRARDEAU, MO 63701
BARNES, SETH S D
610 NORTHVIEW DR
CAPE GIRARDEAU, MO 63701
8ARTON, JOHN L P
1820 SCOTT'S LANE
CAPE GIRARDEAU, MO 63701
BLANKENSHIP, OALE M GP
12 DOCTORS PARK
CAPE GIRAROEAU, MO 63701
BOWMAN, W K CD
14 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
BURCHAM, TOM R GP
RT 1 BOX 168
FARMINGTON, MO 63640
BURFORD, EDWIN K OS
2424 TERRY HILL
CAPE GIRARDEAU, MO 63701
CAMPBELL, EDWARD D CRS
937 8ROADWAY
CAPE GIRARDEAU, MO 63701
CHAPMAN, JEAN A A
35 OOCTORS' PARK
CAPE GIRARDEAU, MO 63701
CLARK, DAVID J GS
SURGICAL CLINIC
NO 10 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
CLARKE, PAUL W OBG
3120 KAGE HILL OR.
CAPE GIRARDEAU, MO 63701
COCHRAN, J R GP
2452 BROOKWOOD
CAPE GIRAROEAU, MO 63701
COULSON, FOREST H IM
36 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
COZBAN, CHARLES H OPH
937 BROADWAY
CAPE GIRARDEAU, MO 63701
CROWE, JOHN T GP
937 BROADWAY
CAPE GIRARDEAU, MO 63701
CUNDIFF, HARRY C JR OPH
2010 SARAH DR.
CAPE GIRARDEAU, MO 63701
DINKENS, JAMES A PD
23 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
DOWNEY, JON P GP
35 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
OZUR, JAMES R IM
14 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
EDWARDS, DONALD E IM
937 BROADWAY
CAPE GIRARDEAU, MO 63701
ELLER, GOROON W ORS
1912 BROADWAY
CAPE GIRARDEAU, MO 63701
ELROD, DENNIS B OBG
211 N SPRIGG ST
CAPE GIRARDEAU, MO 63701
ESSMEYER, JOSEPH K AN
ROUTE 2
CAPE GIRARDEAU, MO 63701
FELKER, J. R U
3238 LAKEWOOD DR
CAPE GIRARDEAU, MO 63701
GLENN, THEODORE J P
1922 SHERWOOD AVENUE
CAPE GIRARDEAU, MO 63701
GROTE, WALT W AN
STAR RT 1
LEOPOLD, MO 63760
HARTMANN, HELMUT US
FROHNA, MO 63748
HER8ERT, CHAS T PD
824 GOOD HOPE ST
CAPE GIRARDEAU, MO 63701
HOLCOMB, JOHN K GP
35 DOCTORS PARK
CAPE GIRAROEAU, MO 63701
HONAAS, TRYGVE O GE
937 BROADWAY
CAPE GIRARDEAU, MO 63701
HORN, PAUL C PTH
1909 HUNTINGTON
CAPE GIRARDEAU, MO 63701

HUNT, ROBERT S GS
10 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
JAEGER, JOS N GP
STATE HWY D
JACKSON, MO 63755
JOHNSON, E D R
937 BROADWAY
CAPE GIRAROEAU, MO 63701
JOHNSON, EARL W R
937 BROADWAY
CAPE GIRARDEAU, MO 63701
JONES, DAVID N GP
BOX 127
CAPE GIRARDEAU, MO 63701
JUNG, CHRISTOPHER H OTO
35 DOCTORS PARK
CAPE GIRARDEAU, MO 637D1
JUNG, J M OPH
21 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
KAMATH, K P S P
1511 BRIARCLIFF
CAPE GIRARDEAU, MO 63701
KASTEN, MELVIN C GS
10 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
KEIM, J H IM
1845 WOODLAWN
CAPE GIRARDEAU, MO 63701
KINDER, JAMES A PD
937 BROADWAY
CAPE GIRARDEAU, MO 63701
KINDER, JERRY L GS
10 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
KOLDYS, KENNETH W D
35 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
KRATZ, PAUL E OBG
2560 GORDONVILLE RD
CAPE GIRARDEAU, MO 63701
LOVINGGOOD, THOS A PTH
6-1 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
LYSKOWSKI, MARIA M P
2301 BELLERIDGE DR.
WOODLAND HILLS
CAPE GIRARDEAU, MO 63701
MAGALETTA, GEO E OBG
937 BROADWAY
CAPE GIRARDEAU, MO 63701
MANGUNTA, VIJAYA K P
BOX 534K ROUTE 2
CAPE GIRARDEAU, MO 63701
MARTIN, RICHARD A OTO
605 RED BUD
CAPE GIRARDEAU, MO 63701
MC DONALD, EUGENE F GP
930 JACKSON TRAIL
JACKSON, MO 63755
MC GINTY, CHAS P GS
10 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
OEHLER, WILLIAM F GP
213 N SPRIGG ST
CAPE GIRARDEAU, MO 63701
OTTO, THOMAS G ORS
1912 BROADWAY
CAPE GIRARDEAU, MO 63701
PALEN, JAMES E GP
15 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
PARSONS, D L GP
35 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
RAPP, HAROLD B R
937 BROADWAY
CAPE GIRARDEAU, MO 63701
RAWLINS, FRED E OBG
1912 BROADWAY
CAPE GIRARDEAU, MO 63701
RIDINGS, G R TR
937 BROADWAY
CAPE GIRARDEAU, MO 63701
RIDINGS, HAROLD D IM
937 BROADWAY
CAPE GIRARDEAU, MO 63701
RINGER, CARL N OPH
2022 ALLEN DR.
CAPE GIRARDEAU, MO 63701
RITTER, C J IM
14 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
RITTER, CARL F R
937 BROADWAY
CAPE GIRARDEAU, MO 63701
RITTER, RAY A ORS
1912 BROADWAY
CAPE GIRARDEAU, MO 63701
RITTER, RAYMOND A ORS
2542 ALLENDALE DR
CAPE GIRARDEAU, MO 63701
ROBERTS, PERRY T OTO
8 DOCTOR'S PARK
CAPE GIRARDEAU, MO 63701
ROBINSON, RONALD L IM
1117 PATRICIA
CAPE GIRARDEAU, MO 63701

SAGO, ALVIN L U
1412 LEXINGTON
CAPE GIRARDEAU, M 63701
SCHULTZ, GEORG C PD
121 E. RODNEY, G-3
CAPE GIRARDEAU, MO 63701
SEABAUGH, L R U
19 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
SEABAUGH, WM O GS
24 N SPRIGG ST
CAPE GIRARDEAU, MO 63701
SHOSS, MILTON R
937 BROADWAY
CAPE GIRARDEAU, MO 63701
SHRIVER, RONALD G R
1538 PARKSITE
CAPE GIRARDEAU, MO 63701
SIDES, STANLEY D IM
14 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
SPARKMAN, THOMAS C GP
15 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
SPENCE, PAUL A GP
35 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
TALBERT, CLIFFORD R CD
14 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
TERRY, JAMES W U
18 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
TIFFANY, DELBERT E IM
1807 NORTHRIDGE ST
CAPE GIRARDEAU, MO 63701
TRUEBLOOD, MICHAEL C ORS
2327 BELLERIDGE
CAPE GIRARDEAU, MO 63701
TYGETT, JOS N OBG
17 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
WHITTEN, J S OBG
35 DOCTORS PARK
CAPE GIRARDEAU, MO 63701
WILSON, CHAS F IM
714 BROADWAY
CAPE GIRARDEAU, MD 63701
WOLFF, PAUL G OPH
1819 BROADWAY
CAPE GIRARDEAU, MO 63701
ZOFFUTO, ANTHONY C IM
14 DR'S PARK
CAPE GIRARDEAU, MO 63701

046—CHARITON-MACON-MONROE-RANDOLPH

AGUILERA, TRINIDAD J GS
301 GRAND AVE
MOBERLY MEDICAL CLIN
MOBERLY, MO 65270
BAKER, JOSEPHINE D AN
614 FISK ST
MOBERLY, MO 65270
BANGASH, JAVED I PD
WOODLAND HOSPITAL
346 WOODLAND
MOBERLY, MO 65270
BARNETT, FLOYD A GP
111 E MONROE ST
PARIS, MO 65275
BAUTISTA, ROGELIO L GS
324 CIRCLE DR
MOBERLY, MO 65270
CAMPBELL, JAMES E GP
1101 JACKSON ST
MACON, MO 63552
CHUTE, WM D PD
346 WOODLAND AVE
MOBERLY, MO 65270
COHRS, CLARENCE C A
423 E LOGAN
MOBERLY, MO 65270
COLLINS, GRETCHEN D GP
605 N RUTHERFORD ST
MACON, MO 63552
DREYER, PHILIP V GP
208 SHORT ST
HUNTSVILLE, MO 65259
EGGLESTON, DONALD E GP
410 N RUTHERFORD
MACON, MO 63552
FLEMING, JACOB W IM
346 WOODLAND AVE
MOBERLY, MO 65270
FLEMING, THOS S CD
517 FORT ST
MOBERLY, MO 65270
HORI, JOSE M PTH
DAVIS MEMORIAL HOSP
BOX 1484
ELKINS, WV 26241
HUBER, LASLEY E GP
107 BRINKERHOFF
MOBERLY, MO 65270
HUDSON, GIP R GP
201 SOUTH MAIN
P.O. BOX 143
HUNTSVILLE, MO 65259

---

* Doctor of Osteopathy

LEE, SOOK-LA GS
309 N ROLLINS
MACON, MO 63552
LIN, C H OBG
346 WOODLAND AVE
MOBERLY, MO 65270
LIN, EI S AN
346 WOODLAND
MOBERLY, MO 65270
LIN, H T IM
346 WOODLAND AVE
MOBERLY, MO 65270
MICIANO, TAAY R GP
1705 SOUTH HALSEY
HARRISONVILLE, MO 64701
MILLER, D H P
8555 S LEWIS
APT 201
TULSA, OK 74136
SHIN, DONG-SOO GS
309 N ROLLINS
MACONLYN, MO 63552
STREETOR, RODERICK D OS
245 UNION BLVD
ST LOUIS, MO 63108
STUART, DANL D GP
103 E VINE
BRUNSWICK, MO 65236
TOMPSON, ROBT V GS
423 E LOGAN
MOBERLY, MO 65270

050—CLAY

ADAMS, HOWARD D GP
WESTOWNE II
LIBERTY, MO 64068
ALBANI, FRANK J U
1340 CAMELOT
LIBERTY, MO 64068
ALLAIN, JAMES J OPH
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
ALLEN, LOUIS A PTH
2800 HOSPITAL DR
KANSAS CITY, MO 64116
ANDERSON, ROBERT GP
11500 AMBASSADOR DR
KANSAS CITY, MO 64195
ANDREWS, BERNEIL W U
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
ARMSTRONG, JAY H R
4812 BLACK SWAN DR
SHAWNEE MISSION, KS 66216
ARST, HERBERT E IM
408 E 68TH ST N
KANSAS CITY, MO 64118
BALHUIZEN, JOHN PUD
5601 N ANTIOCH RD
KANSAS CITY, MO 64119
BATES, GEO C CD
2700 HOSPITAL DR STE 53
NORTH KANSAS CI, MO 64116
BEAMON, RICHARD F OS
SUITE 101
8600 N.W. 64TH ST.
KANSAS CITY, MO 64152
BENSON, LARRY E IM
2700 HOSPITAL DR STE 24
NORTH KANSAS CI, MO 64116
BOONE, DANL C OM
5800 N GRAND AVE
KANSAS CITY, MO 64118
BOWLES, RICHARD P GP
114 N WATER ST
LIBERTY, MO 64068
BOWNIK, THEODORE B IM
2700 HOSPITAL DR
SUITE 530
KANSAS CITY, MO 64116
BOWSER, ROBERT L AN
P. O. BOX 295
LIBERTY, MO 64068
BRAHMACUPTA, NANTHANA PD
107 SPRING ST
EXCELSIOR SPGS., MO 64024
BURK, EMMETT K IM
WESTOWNE III
LIBERTY, MO 64068
BURROUGHS, NATHAN D PS
2700 HOSPITAL DRIVE
NORTH KANSAS CI, MO 64116
CALHOUN, TERRY L IM
RR 5 BOX 36-R
LIBERTY, MO 64068
CASHIER, DWIGHT GP
K.U. MED. CTR.
39TH & RAINBOW BLVD.
KANSAS CITY, KS 66103
CASTILLO, MICHAEL E OPH
WESTOWNE V SUITE 501
LIBERTY, MO 64068
CHATKUPT, SUTHON GS
1205 N JESSE JAMES RD
EXCELSIOR SPRIN, MO 64024

CHILES, DAVID R GP
620 COMMERCIAL AVE
SMITHVILLE, MO 64089
COOK, JERRY W OPH
7010 N CHERRY
KANSAS CITY, MO 64118
COOPER, BARRY R DR
2800 HOSPITAL DR
NORTH KANSAS CI, MO 64116
COOPER, GARY D GE
SUITE 100 WESTOWNE III
LIBERTY, MO 64068
CSAKI, BELA US
WESTOWNE IV SUITE 205
LIBERTY, MO 64068
CURNOW, RICHARD B ORS
WESTOWNE OFFICES
LIBERTY, MO 64068
DEL MURO, FRANCISCO GP
5601 ANTIOCH RD STE 8
KANSAS CITY, MO 64119
DELIGEORGES, JOHN OPH
7010 N CHERRY
KANSAS CITY, MO 64118
DENTON, ROBT E OS
SMITHVILLE CLINIC BOX E
SMITHVILLE, MO 64089
DERNONCOURT, JOHN E GP
SMITHVILLE CLINIC
SMITHVILLE, MO 64089
DEVINE, MARK W OTO
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
DOLAN, CHARLES T PTH
2800 HOSPITAL DR
KANSAS CITY, MO 64116
DUNHAM, ROBT H GP
6022 ANTIOCH RD
KANSAS CITY, MO 64119
DY-RAGOS, RAMON R NS
10106 NW 74TH ST
KANSAS CITY, MO 64152
EDWARDS, THEODORE F PD
2029 BURLINGTON AVE
NORTH KANSAS CI, MO 64116
FAKHOURY, DONALD A GP
4030 N OAK ST TRAFFICWA
KANSAS CITY, MO 64116
FISCHER, EDWARD H CD
2929 BALTIMORE
KANSAS CITY, MO 64108
FISCHER, JOSE M P
2900 HOSPITAL DRIVE
KANSAS CITY, MO 64116
FLANDERS, VIRGIL E GP
9305 NW 79TH
KANSAS CITY, MO 64152
FORTIN, DON G PS
WESTOWNE VII SUITE 702
LIBERTY, MO 64068
FOWLER, I C OM
700 N E BARNES
KANSAS CITY, MO 64118
GALBOL, HARLEY I GP
522 ELMS BLVD
EXCELSIOR SPRIN, MO 64024
GAUER, ROBT J PD
5601 ANTIOCH RD
KANSAS CITY, MO 64119
GERAGHTY, THOMAS E PS
2700 HOSPITAL DR
N KANSAS CITY, MO 64116
GUKHOOL, PREMLALL DR
2525 GLENN HENDREN DR
LIBERTY, MO 64068
HAAS, ROBERT W ORS
SUITE R WESTOWNE OFFICE
LIBERTY, MO 64068
HAGAN, JOHN C OPH
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
HALEY, TED M GP
405 E 19TH AVE
KANSAS CITY, MO 64116
HARVEY, THOMAS S GP
540 MAIN
WESTON, MO 64098
HAYES, LAWRENCE L GP
8630 N OAK ST TRFWY
KANSAS CITY, MO 64155
HEDGES, RICHARD C OM
2025 SWIFT
NORTH KANSAS CI, MO 64116
HENDREN, THOS H GS
WESTOWNE III STE 101
LIBERTY, MO 64068
HENRY, JOS E IM
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
HODGE, ROBT H IM
2204 NE 39TH ST
KANSAS CITY, MO 64116
ISE, FRANK H ORS
2030 SWIFT AVE
NORTH KANSAS CI, MO 64116
KATF, NICOLA Y P
2800 HOSPITAL DR
KANSAS CITY, MO 64116

KELLY, JOSEPH G AN
P O BOX 295
LIBERTY, MO 64068
KING, PHILLIP E DR
2 GARDNER ST
JOHNSTOWN, PA 15905
KIRKLAND, JERRY A IM
8630 NORTH OAK
KANSAS CITY, MO 64155
KUENZI, DONALD E GP
8630 N OAK TRFWY
KANSAS CITY, MO 64155
*LANDERS, GARY A OS
2800 HOSP DR
NORTH KANSAS CI, MO 64116
LANNING, R J U
2700 HOSPITAL DR STE 20
NORTH KANSAS CI, MO 64116
LATIMER, WALTER N PD
5140 NE ANTIOCH RD
KANSAS CITY, MO 64119
LERNER, SCOTT A PUD
2700 HOSPITAL DR
#410
N KANSAS CITY, MO 64116
LESLIE, STEPHEN A PDA
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
LILA, ARAM IM
1205 N JESSE JAMES RD
EXCELSIOR SPRIN, MO 64024
LITTLEJOHN, ROBERT T ORS
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
LLANES-RODAS, RIZALINA PD
2700 HOSPITAL DR
KANSAS CITY, MO 64116
MC CLUGGAGE, NEWTON C IM
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
MC CORMICK, JAMES E GP
4030 N OAK ST
KANSAS CITY, MO 64116
MC ELROY, MICHAEL B ORS
2700 HOSPITAL DR
NORTH KANSAS CI, MO 64116
MC PHEE, WM R PTH
1205 W 76TH ST
KANSAS CITY, MO 64114
MILLER, THOMAS GP
K.U. MED. CTR.
39TH & RAINBOW BLVD.
KANSAS CITY, KS 66103
MULLINS, BERNARD L GP
405 E 19TH ST
NORTH KANSAS CI, MO 64116
MUSGRAVE, DAVID E IM
420 N KIMBALL
EXCELSIOR SPRIN, MO 64024
MYERS, CARL M GP
PLATTE MEDICAL CLINIC
P O BOX 990
PLATTE CITY, MO 64079
MYERS, DAVID W OBG
610 S COMMERCIAL AVE
SMITHVILLE, MO 64089
NOURBAKHSH, MAHMOUD M GS
405 E 19TH AVE
NO KANSAS CITY, MO 64116
*OLMSTEAD, JOHN P GP
2025 SWIFT
NORTH KANSAS CI, MO 64116
PALMERI, VICENTE C GP
UNIV. OF OKLA MED. COL.
2727 E. 21ST MIDWAY BLD
TULSA, OK 74105
PATTERSON, CARROLL D P
SUITE 202
WESTOWNE IV
LIBERTY, MO 64068
PILEGGI, FELIX A GP
405 E 19TH ST
NORTH KANSAS CI, MO 64116
PINGLETON, WILLIAM W PUD
410 PROFESSIONAL BLDG N
2700 HOSPITAL DR
KANSAS CITY, MO 64116
PRATHER, WILLIAM R IM
2029 BURLINGTON
NORTH KANSAS CI, MO 64116
PURCELL, PAUL W GP
P O BOX D-2
SMITHVILLE, MO 64089
RASMUSSEN, MICHAEL A OS
8001 NW LONDON DR
KANSAS CITY, MO 64151
REEDER, CHAS C GP
620 COMMERCIAL AVENUE
SMITHVILLE, MO 64089
REVARE, PAUL OS
SPELMAN MEM HOSP
SMITHVILLE, MO 64089
ROBINSON, VAN M GS
300 PROFESSIONAL BLDG
2700 HOSPITAL DRIVE
KANSAS CITY, MO 64116
ROCKWELL, WAYNE L OBG
2700 HOSPITAL DRIVE
KANSAS CITY, MO 64116

---

* Doctor of Osteopathy

ROSS, WALTER R JR	SUITE 100 WESTOWNE III LIBERTY, MO 64068	PUD
SANDERS, GEO E	617A WILLOW DR LEE'S SUMMIT, MO 64063	GP
SAWYER, FLOYD E	5350 N OAK ST TRAFFICWA KANSAS CITY, MO 64118	PD
SCHERTZ, TRUMAN B	2700 HOSPITAL DR STE 40 NORTH KANSAS CI, MO 64116	OPH
SCHUTZ, JOHN P	1236 JESSE JAMES ROAD EXCELSIOR SPRIN, MO 64024	US
SIMON, GRACITA S	1020 N WOODLAND DR KANSAS CITY, MO 64118	US
SLAUGHTER, CARL R	1001 N WOODLAND KANSAS CITY, MO 64118	OBG
*SMITH, CHAS H	2025 SWIFT KANSAS CITY, MO 64116	GP
SOMOZA, JOSE R	15 N E HILL ST KANSAS CITY, MO 64116	PTH
SOPER, WM D	11 WESTOWNE CTR LIBERTY, MO 64068	GP
SPORTSMAN, WELDON L	7504 N OAK ST TRFY KANSAS CITY, MO 64118	A
STRATMAN, CLARENCE A	6002-A N ANTIOCH RD KANSAS CITY, MO 64119	GP
TADEO, ROMANITO A	SPELMAN MEM HOSP SMITHVILLE, MO 64089	AN
TANEY, GARY W	2700 HOSPITAL DR SUITE 5 NORTH KANSAS CI, MO 64116	OBG
THOMAS, FRED A	5601 N ANTIOCH KANSAS CITY, MO 64119	D
THOMAS, THOMAS C	P O BOX 217 LIBERTY, MO 64068	GP
TRIPLETT, DANL A	2700 HOSP DR STE 500 NORTH KANSAS CI, MO 64116	OBG
TRUE, JAMES D	TRI-CNT COM MNT HLTH CT 2900 HOSPITAL DR KANSAS CITY, MO 64116	US
TUMANUT, BENESTO F	5601 N ANTIOCH RD KANSAS CITY, MO 64119	OTO
UNDERWOOD, JOHNSON	5140 N E ANTIOCH RD KANSAS CITY, MO 64119	GS
VILMER, CHARLES E	2030 SWIFT AVE NORTH KANSAS CI, MO 64116	ORS
VILMER, STEPHEN E	2030 SWIFT NORTH KANSAS CI, MO 64116	ORS
WALD, DONALD M	1608 N E 69TH ST KANSAS CITY, MO 64118	R
WALTZ, JAMES R	WESTOWE III SUITE 101 LIBERTY, MO 64068	GS
WATERMAN, FRANKLIN M	101 W KANSAS LIBERTY, MO 64068	GP
WEBB, JOHN M	525 PROFESSIONAL BLDG N 2700 HOSPITAL DR KANSAS CITY, MO 64116	GS
WEIDE, ALLAN R	2700 HOSPITAL DR NORTH KANSAS CI, MO 64116	U
WERNER, DEAN F	2025 SWIFT AVE NORTH KANSAS CI, MO 64116	OM
WERNER, FRANKLIN C	5140 ANTIOCH RD KANSAS CITY, MO 64119	GS
WHEELER, PAUL D	2700 HOSPITAL DR SUITE KANSAS CITY, MO 64116	OBG
WICKS, EDWIN O	506 NW 43RD ST KANSAS CITY, MO 64116	PH
WILLIAMS, JOHN M	102 S FOREST LIBERTY, MO 64068	GP
WILLIAMS, ROBT D	6700 TROOST AVE KANSAS CITY, MO 64131	US
WILLIAMSON, GEO L	2030 SWIFT KANSAS CITY, MO 64116	ORS
WILSON, DAVID E	8630 N OAK TRAFFICWAY KANSAS CITY, MO 64155	GP
WITHROW, JOHN B	3925 N MAIN KANSAS CITY, MO 64116	OS
WOLFRAM, PHILIP H	620 COMMERCIAL ST SMITHVILLE, MO 64089	GP
WORKMAN, CHAS E	2700 HOSPITAL DR SUITE NORTH KANSAS CI, MO 64116	ORS
WOY, GEORGE H	SUITE 700 WESTOWNE VII LIBERTY, MO 64068	ORS
WRIGHT, EARL J	2800 HOSPITAL DRIVE KANSAS CITY, MO 64116	PTH

054—CLINTON

LUCKENBILL, PAUL T	BOX 353 PLATTSBURG, MO 64477	GP
OZENBERGER, LARRY A	400 CLAY AVE PLATTSBURG, MO 64477	GP
SPALDING, WILBER B	PLATTSBURG, MO 64477	GP
SWEIGER, JAMES H	ROUTE 1 PLATTSBURG, MO 64477	GP

058—COLE

ALLAN, JAMES E	2709 INDUSTRIAL DR. SUITE A JEFFERSON CITY, MO 65101	GP
BELDEN, EDGAR A	2124 LOWELL JEFFERSON CITY, MO 65101	PH
BOWE, EDWIN E	915 LESLIE BLVD JEFFERSON CITY, MO 65101	AN
BOYER, PETER A	1505 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	IM
BRAUN, ALAN L	2709 INDUSTRIAL JEFFERSON CITY, MO 65101	IM
BREGANT, ROBT E	1505 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	IM
BUSBY, WM E	917-A LESLIE BLVD JEFFERSON CITY, MO 65101	PD
CLARK, KENDALL A	RT 4 BOX 421 FULTON, MO 65251	GE
COOPER, CHAS W	423 CHERRY ST JEFFERSON CITY, MO 65101	GP
COURTER, LARRY P	1505 S W BLVD JEFFERSON CITY, MO 65101	R
COX, WM A	812 SWIFTS HIGHWAY JEFFERSON CITY, MO 65101	GP
DAVISSON, WALTER F	611 WEST ELM JEFFERSON CITY, MO 65101	OPH
DECKERT, JAMES J	RT #3 CALIFORNIA, MO 65018	GP
DOERHOFF, ADELIA L	SHEPHERD HILLS DR JEFFERSON CITY, MO 65101	AN
DOERHOFF, ALAN R	SHEPHERD HILLS DR JEFFERSON CITY, MO 65101	GS
EARP, RALPH T	701 W HIGH ST JEFFERSON CITY, MO 65101	IM
EXON, C S	1505 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	GS
FALZONE, JOHN J	824 SOUTHWEST BLVD UROLOGY CARE INC JEFFERSON CITY, MO 65101	U
FILES, JAMES B	CHARLES E STILL HOSPITA 1125 S MADISON STREE JEFFERSON CITY, MO 65101	PTH
FULLGRABE, EMIL A	1914 GREEN MEADOW DR JEFFERSON CITY, MO 65101	GP
GARNER, LYNN M	403 MEIER DR JEFFERSON CITY, MO 65101	PH
GARNER, ROYAL S	1804 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	GP
*GIFFEN, LAWRENCE E	420 EAST HIGH ST JEFFERSON CITY, MO 65101	GP
GORDON, JAMES S	600 BOONVILLE RD JEFFERSON CITY, MO 65101	AN
GUHLEMAN, HENRY V	506 E HIGH ST JEFFERSON CITY, MO 65101	P
GUNN, VICTORIA	BOX 1642 JEFFERSON CITY, MO 65101	D
HANDLER, FRED P	614 BOONVILLE ROAD JEFFERSON CITY, MO 65101	PTH
HAUSER, ROBT J	1431 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	OBG
HUGHES, DEREK	DRS PARK 1111 MADISON JEFFERSON CITY, MO 65101	P
KANAGAWA, HAROLD K	701 W HIGH JEFFERSON CITY, MO 65101	IM
KLEBBA, LARRY B	P O BOX 403 JEFFERSON CITY, MO 65101	GS
KRAUTMANN, JOHN J	1433 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	ORS
LANDSBAUM, CHARLES J	701 W HIGH ST JEFFERSON CITY, MO 65101	GE
LESLIE, JAMES T	1433 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	ORS
LOYD, EARL L	RIVIERA HEIGHTS HOLTS SUMMIT, MO 65043	IM
MARTY, DAVID R	606 DIX RD JEFFERSON CITY, MO 65101	OTO
MATTHEWS, JOHN I	1314 MOREAU DR JEFFERSON CITY, MO 65101	IM
MC CAFFREE, MARY K	812 CRESTMERE JEFFERSON CITY, MO 65101	IM
MC HANEY, JOHN W	1819 BROOKSIDE JEFFERSON CITY, MO 65101	GP
MEIER, FRANCIS X	1913 HAYSELTON DR JEFFERSON CITY, MO 65101	GP
MEINERSHAGEN, CHAS W	111 FOREST HILL JEFFERSON CITY, MO 65101	PH
*NEMER, ROBT J	VIENNA, MO 65582	GP
OAKES, CECIL E JR	ST. MARY'S HEALTH CTR JEFFERSON CITY, MO 65101	EM
OSSMAN, JULIAN A	2407 W MAIN JEFFERSON CITY, MO 65101	GS
RAGLAND, JOHN E	P O BOX 517 LINN, MO 65051	US
REA, JAMES L	606 DIX RD JEFFERSON CITY, MO 65101	OTO
RUSSELL, JOS P	1717 GREENBERRY RD JEFFERSON CITY, MO 65101	GPM
RYAN, THOMAS J	1433 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	ORS
SANDERS, JACK S	1505 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	CD
SCHERR, DAVID D	1111 MADISON ST JEFFERSON CITY, MO 65101	ORS
SCHMIDT, JEROME H	824 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	U
SCHOKKER, JOHANNES	2009 E MC CARTY JEFFERSON CITY, MO 65101	GS
SCOTT, EARL D	2009 E MC CARTY JEFFERSON CITY, MO 65101	GP
SENNOTT, JOHN S	1407 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	PD
SHULL, G D	1431 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	GP
SIU, KENNETH K	915 A LESLIE BLVD JEFFERSON CITY, MO 65101	GS
STAUFFER, HARRY B	830 BOONVILLE RD JEFFERSON CITY, MO 65101	OPH
STAUFFER, LARRY K	700 W HIGH ST JEFFERSON CITY, MO 65101	OPH
STRICKER, HAROLD C	1431 SOUTHWEST BLVD JEFFERSON CITY, MO 65101	OBG
SU, PHILO S	418 VALLEY PARK DR JEFFERSON CITY, MO 65101	OBG

---

* Doctor of Osteopathy.

SUGARBAKER, EVERETT D GS
503 E HIGH ST
JEFFERSON CITY, MO 65101
SUMMERS, JOS S DR
214 MARSHALL ST
JEFFERSON CITY, MO 65101
TANNER, RO8T H GP
1505 SOUTHWEST BLVD
JEFFERSON CITY, MO 65101
TAYLOR, LEON A GP
1104 W MAIN ST
JEFFERSON CITY, MO 65101
VAN LEEUWEN, GERARD OS
BROADWAY STATE OFFICE B
P O 8OX 570
JEFFERSON CITY, MO 65101
VAN VRANKEN, EUGENE E PH
907 MO BLVD
JEFFERSON CITY, MO 65101
WANKUM, ROBERT P OPH
1101-D SOUTHWEST 8LVD
JEFFERSON CITY, MO 65101
WATTS, BYRON E R
1505 SOUTHWEST 8LVD
JEFFERSON CITY, MO 65101
WEISS, JAMES J GP
1505 SOUTHWEST BLVO
JEFFERSON CITY, MO 65101
WERTH, JOS A O
917 LESLIE BLVD STE 3
JEFFERSON CITY, MO 65101
WESTHOFF, DAVID D IM
1505 SOUTHWEST BLVD
JEFFERSON CITY, MO 65101
WINEGAR, ALVON C OBG
1431 SOUTHWEST BLVD
JEFFERSON CITY, MO 65101

062—COOPER

ABELE, WM A IM
620 MAIN ST
BOONVILLE, MO 65233
AVERY, WILLARD 8 PD
329 MAIN ST
BOONVILLE, MO 65233
HATA, DAIKICHI IM
329 MAIN ST
BOONVILLE, MO 65233
HUMPHREYS, EDWARD T GS
329 MAIN ST
8OONVILLE, MO 65233
STUART, BYRON M IM
329 MAIN ST
BOONVILLE, MO 65233
WINN, GEO W GS
6TH & SPRING ST
BOONVILLE, MO 65233

066—DALLAS-HICKORY-POLK-DADE

CARNELL, BILLY M GP
BUFFALO MEO CENTER-BOX
BUFFALO, MO 65622
GRIFFIN, M E US
1257 CHERRY
BUFFALO, MO 65622
GRIFFIN, OLIN`A PH
BUFFALO, MO 65622
HARRELL, HENRY J OS
ROUTE 1 BOX 535
SUMMERFIELD, FL 32691
KAHLER, MONTE R GP
108 N MAIN ST
BOLIVAR, MO 65613
MC CRAW, DOYLE C GP
711 N MAIN
BOLIVAR, MO 65613
MC NEEL, LEE A IM
GREENFIELO, MO 65661
ROBINSON, GEO G GP
HUMANSVILLE, MO 65674

070—DUNKLIN

CASH, CHAS R GP
OUNMIRE ANO CASH CLINIC
KENNETT, MO 63857
CHENG, TUAN CHOU U
P. O. BOX 309
KENNETT, MO 63857
CROOM, DORWYN W GP
P O BOX 518
WEST MEMPHIS, AR 72301
DUNMIRE, GEO Q IM
504 S BAKER
KENNETT, MO 63857
ENGLISH, WALLACE D GP
P O BOX 107
CARDWELL, MO 63829
GREEN, JAMES R OBG
501 TEACO RO
KENNETT, MO 63857
HUANG, JUN S OBG
31 MELWOOD STREET
WATSONVILLE, CA 95076
KUNTZE, RANDALL P US
501 TERRACE RD.
KENNETT, MO 63857
LEGAN, JOHN K GS
617 BUTLER
KENNETT, MO 63857
LOPANSRI, SOMAK GP
3571 OSCAR AVE
PADUCAH, KY 42001
MANUBAY, TERESITA PD
204 W LINDEN CIRCLE
KENNETT, MO 63857
MANUBAY, THEODORO R
204 W LINDEN CIRCLE
KENNETT, MO 63857
MILTENBERGER, PAUL C GS
211 TEACO RD
KENNETT, MO 63857
MOREHEAD, WM E GP
505 N BECKWITH
MALDEN, MO 63863
PALENSKE, ROBT L GP
HORNERSVILLE, MO 63855
PU, PIN H PTH
P O BOX 827
KENNETT, MO 63857
SINASA, SURAT PTH
105 E. WASHINGTON
KENNETT, MO 63857
SISLER, MAYNARD L IM
217 COLLEGE
KENNETT, MO 63857
SOONATTRAKUL, WUTHISAK IM
1616 W WASHINGTON
KENNETT, MO 63857
TARVER, QUINTON GP
919 S JACKSON ST 8OX 64
KENNETT, MO 63857
ZIMMERMAN, JOE A GP
1105 WHITE OAKS PL.
KENNETT, MO 63857

074—FRANKLIN-GASCONADE-WARREN

ALLEN, JERRY H PD
800 E. FIFTH ST
SUITE 202
WASHINGTON, MO 63090
AULENBACHER, CARL E GS
#1 EMERSON OR
WASHINGTON, MO 63090
BAKER, DONALD L GP
MEDICAL ARTS CLINIC
UNION, MO 63084
BANERJEE, DILIP IM
800 E 5TH ST
WASHINGTON, MO 63090
BONNEY, SAML C OS
1325 S GRAND BLVD
ST LOUIS, MO 63104
BRENNER, PAUL A GP
108 W WASHINGTON ST
OWENSVILLE, MO 65066
CARLI, ALEXANDER GS
800 E. 5TH ST.
WASHINGTON, MO 63090
CRANE, JOHN B P
WASHINGTON, MO 63090
CRAWFORD, ROBT M GP
20 HUGHES FORD RD
SULLIVAN, MO 63080
DE LA TORRE, JOHN J GP
459 W SPRINGFIELD
SULLIVAN, MO 63080
EISENMANN, 8ENJ P GP
NEW HAVEN, MO 63068
EYERMANN, HENRY W GP
WARRENTON, MO 63383
FARRELL, SAMMY L GP
205 ELM ST
WASHINGTON, MO 63090
HOELSCHER, HAROLD F GP
304 E MAIN ST
WARRENTON, MO 63383
KIM, YANG H OBS
800 EAST 5TH ST.
SUITE 105
WASHINGTON, MO 63090
LEE, IN K OBG
205 ELM ST
WASHINGTON, MO 63090
MITCHELL, THOS J GP
75 N MAIN
ST CLAIR, MO 63077
MOELLENHOFF, ROBT W IM
900 E. 8TH ST., SUITE C.
WASHINGTON, MO 63090
MURNEY, JOSEPH GS
201 ELM ST
WASHINGTON, MO 63090
POST, JOHN P GP
416 CEDAR ST
WASHINGTON, MO 63090
RAWSON, PERRY G PTH
ST FRANCIS MERCY HOSPIT
WASHINGTON, MO 63090
RICHARDSON, GEO A GP
BOX 307
UNION, MO 63084
RICHARDSON, WM R GP
BOX 228
UNION, MO 63084
ROYSE, ROY P GP
316 ELM ST
SULLIVAN, MO 63080
RYAN, JOHN 8 GP
429 CEDAR
WASHINGTON, MO 63090
SCHMIDT, CHAS A GP
GERALD MED CENTER
GERALD, MO 63037
SHAW, JAMES T GP
18TH & WEIN STS
HERMANN, MO 65041
SHEA, JAMES G IM
205 ELM ST
WASHINGTON, MO 63090
SINCOX, CHAS H GP
205 ELM
WASHINGTON, MO 63090
STINE, GORDON W GP
205 ELM
WASHINGTON, MO 63090
STREHLMAN, BENJ G GP
510 WEST END
UNION, MO 63084
UMALI, EMILIANO C GS
EL VALLIJO SUBDO
#6 VIONTO DR
WASHINGTON, MO 63090
WOLCOTT, JAMES B GS
3109 OAK MOUNTAIN TRAIL
SAN ANGELO, TX 76901
WORKMAN, GEO M GP
P O BOX 246
18TH & WEIN ST
HERMANN, MO 65041
ZAHN, FREDERICK R OS
ST FRANCIS MERCY HOSP.
200 MADISON AVE
WASHINGTON, MO 63090

078—GRAND RIVER (Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb Counties)

BALES, EUGENE L IM
BALES CLINIC
111 N FOLGER ST
CARROLLTON, MO 64633
BOHNSACK, RALPH W GP
125 E LOCKLING
BROOKFIELD, MO 64628
BROYLES, WATKINS A GP
P O 8OX 352
BETHANY, MO 64424
COFER, THOS N IM
511 ELM P O BOX 905
CHILLICOTHE, MO 64601
CONRAD, JOS A GP
511 ELM ST
P O BOX 905
CHILLICOTHE, MO 64601
CROSS, ALBERT O GP
613 E FIRST ST
TRENTON, MO 64683
DALEY, FRANK R GP
HAMILTON, MO 64644
OIXON, JOHN R GS
125 E LOCKLING ST
BROOKFIELD, MO 64628
DUFFY, OLIVER F US
902 CUSTER
TRENTON, MO 64683
ELLSWORTH, WILLARD GP
CAINSVILLE, MO 64632
FAIR, WM L GP
910 CLAY ST
CHILLICOTHE, MO 64601
FUSON, WM A GP
108 STREET
P O BOX 2579
CALEDONIA, MI 49316
GALE, JOS F GP
103 11TH ST
CHILLICOTHE, MO 64601
GALVEZ, SISENANDO P IM
105 S KANSAS
MARCELINE, MO 64658
GARY, GEO GP
121 N KANSAS
MARCELINE, MO 64658
GEARHART, MERRIAM GS
2525 MILLER ST
BETHANY, MO 64424
GILLILAND, CHAS E PTH
817 W 4TH ST
CAMERON, MO 64429
HOWELL, BILLY D GP
P O BOX 367
BROOKFIELD, MO 64628
MANDLER, GEO OTO
913 WEBSTER ST
CHILLICOTHE, MO 64601
MC ARTOR, THOS R GP
BOX 135
BROWNING, MO 64630
NIXON, EDWARD E GP
GALLATIN, MO 64640

PARK, YOUNG E PTH
100 CENTRAL STREET
CHILLICOTHE, MO 64601

PLATZ, JOHN H GP
16 N MONROE ST
CARROLLTON, MO 64633

ROSE, JOHN F R
1024 GRANDVIEW
CHILLICOTHE, MO 64601

RYAN, DAVID FP
618 E. FIRST ST.
TRENTON, MO 64683

SMITH, ROBT W GP
BROOKFIELD PLAZA
BROOKFIELD, MO 64628

STATON, R H GP
215 S MAIN ST
CARROLLTON, MO 64633

SZYMANSKI, STANLEY R R
329 N ROLLINS ST
MACON, MO 63552

TRINIDAD, HERMANITO R GS
103 - 11TH ST., SUITE 8
CHILLICOTHE, MO 64601

WILSON, FRED K GP
WINSTON, MO 64689

YOON, JIN S OBG
103 11TH ST
CHILLICOTHE, MO 64601

082—GREENE

ALCANCIA, ELPIDIO Y TR
1423 N JEFFERSON
SPRINGFIELD, MO 65802

ALLEN, JERRY H GS
1211 S GLENSTONE ST
SPRINGFIELD, MO 65804

ALLISON, JAMES B P
2200 E SUNSHINE STE 301
SPRINGFIELD, MO 65804

ANCHETA, APOLINARIO A GS
1715 BOONVILLE
SPRINGFIELD, MO 65803

ANTHONY, DALLAS D R
609 CHERRY
PROFESSIONAL BLDG SU
SPRINGFIELD, MO 65806

ASH, CHARLES J ORS
1443 N ROBBERSON ST
SPRINGFIELD, MO 65802

ASHLEY, THOS E GS
1211 S GLENSTONE ST
SPRINGFIELD, MO 65804

ATKINSON, THOS E OPH
1900 S NATIONAL NO 1400
SPRINGFIELD, MO 65804

AUNER, CECIL R IM
600 S GLENSTONE
SPRINGFIELD, MO 65802

BACK, DONALD K IM
1211 S GLENSTONE
SPRINGFIELD, MO 65804

BAILEY, ALAN H PUD
609 CHERRY ST
221 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

BALDWIN, RICHARD M OBG
600 S GLENSTONE ST
SPRINGFIELD, MO 65802

BARNHILL, FLOYD R OTO
1900 SOUTH NATIONAL
SPRINGFIELD, MO 65804

BARTLETT, JOHN E DR
COX MED CNTR DPT OF R
SPRINGFIELD, MO 65802

BARTLEY, RICHARD L GP
SOUTHWEST MISSOURI STAT
TAYLOR HEALTH CENTER
SPRINGFIELD, MO 65802

BEISNER, DONALD H OPH
2900 S FREMONT
SPRINGFIELD, MO 65804

BENNETT, ROBERT U ORS
1550 E. SUNSHINE
SPRINGFIELD, MO 65804

BENNOCH, SHANE L OS
COX MED CNTR
1423 N JEFFERSON
SPRINGFIELD, MO 65802

BENSON, RONALD G OBG
404 E BATTLEFIELD
SPRINGFIELD, MO 65807

BENTLEY, JOHN D IM
1900 S NATIONAL SUITE 2
SPRINGFIELD, MO 65804

BERRY, PAUL T GP
1740 S GLENSTONE OFF O
SPRINGFIELD, MO 65804

BLADES, ROSS D U
1211 S GLENSTONE AVE
SPRINGFIELD, MO 65804

BONEBRAKE, ALBERT J OBG
304 PROF BLDG
SPRINGFIELD, MO 65802

BONEBRAKE, MAC D OBG
609 CHERRY ST
304 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

BOONE, MARTIN H AN
RT 2 BOX 315
SPRINGFIELD, MO 65802

BORJA, EGBERT R IM
1423 N JEFFERSON
RADIATION DEPT
SPRINGFIELD, MO 65802

BRENT, LANNY R DR
208 MEDICAL TOWER
SPRINGFIELD, MO 65802

BRIAN, WM J AN
229 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

BRIGHT, JAMES E P
1900 S. NATIONAL
SPRINGFIELD, MO 65804

BROADDUS, LOREN E IM
1550 E SUNSHINE
SPRINGFIELD, MO 65804

BROOKS, JOHN E N
609 CHERRY
406 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

BROWN, DAVID W ORS
609 CHERRY ST
SPRINGFIELD, MO 65806

BROWN, JAMES T CD
2222 E BERKELEY
SPRINGFIELD, MO 65804

BURKEY, JORDAN W OTO
410 PROF BLDG
SPRINGFIELD, MO 65806

BUSIEK, ERWIN F PD
609 CHERRY
319 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

BUSIEK, PAUL J PD
1717 E GRAND
SPRINGFIELD, MO 65804

BUSIEK, URBAN J PD
609 CHERRY ST
319 PROF BLDG
SPRINGFIELD, MO 65806

BUSSMAN, YVONNE C PD
1211 S. GLENSTONE
SPRINGFIELD, MO 65804

BUSSMANN, DONALD W JR U
1260 E. SUGAR HILL
SPRINGFIELD, MO 65804

BUTLER, CHARLES F IM
1443 N ROBBERSON
SUITE 303
SPRINGFIELD, MO 65802

CALLAWAY, GUY D CD
901 E PORTLAND
SPRINGFIELD, MO 65804

CANLAS, MARIO P NS
205 MEDICAL TOWERS
SPRINGFIELD, MO 65802

CARLTON, LYNN N DR
403 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

CARR, PHILLIP W CD
1211 S GLENSTONE
SPRINGFIELD, MO 65804

CARRELL, ROBERT P AN
229 PROFESSIONAL BLDG
609 CHERRY
SPRINGFIELD, MO 65806

CHEEK, J W CD
1900 S NATIONAL AVE
SPRINGFIELD, MO 65804

CHRISTENSEN, HAROLD L CD
1550 SUNSHINE
SPRINGFIELD, MO 65804

CHRISTY, RAYMOND A PD
1211 S GLENSTONE ST
SPRINGFIELD, MO 65804

CLARKE, MICHAEL J GS
609 CHERRY ST
116 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

CLARKE, MICHAEL S ORS
600 S GLENSTONE ST
SPRINGFIELD, MO 65802

CLARY, WM F US
1900 S NATIONAL
SPRINGFIELD, MO 65804

CLAWSON, JAMES W GS
609 CHERRY
305 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

CLAYTON, EDGAR L PDA
609 CHERRY ST
103 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

COCHRAN, THOS E CD
1211 S GLENSTONE ST
SPRINGFIELD, MO 65804

COLLER, FREDERICK C R
2108 E CAMBRIDGE
SPRINGFIELD, MO 65804

COLLINS, DOUGLASS D N
114 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

CONRAD, RAYMOND C OBG
609 CHERRY ST
117 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

COOK, JAMES R AN
2333 E GLENWOOD
SPRINGFIELD, MO 65804

COOPER, CLAUDE W CD
1211 S GLENSTONE
SPRINGFIELD, MO 65804

CORDONNIER, JAMES K GS
1550 E SUNSHINE
SPRINGFIELD, MO 65804

CORRY, FRANCIS M GS
1211 S GLENSTONE
SPRINGFIELD, MO 65804

COSCIA, ROBERT L GS
501 MEDICAL TOWER
SPRINGFIELD, MO 65802

COULTER, JAMES W PUD
BOX 192C RT 3
ROGERSVILLE, MO 65742

CRAWFORD, ORAL B AN
609 CHERRY
229 PROF BLDG
SPRINGFIELD, MO 65806

CRIGHTON, JOHN C GS
501 MEDICAL TOWER
SPRINGFIELD, MO 65802

CROSTHWAIT, EDWARD L GP
1305 BATTLEFIELD
SPRINGFIELD, MO 65804

CUNNINGHAM, D D GP
1715 BOONVILLE AVE
SPRINGFIELD, MO 65803

CUNNINGHAM, RICHARD D IM
609 CHERRY ST.
SPRINGFIELD, MO 65801

DANIELSSON, ERNST P PS
3324 E REDBUD LANE
SPRINGFIELD, MO 65804

DECKARD, SHELBY W IM
2256 E MEADOW
SPRINGFIELD, MO 65804

DILLARD, ERIN M ORS
118 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

DILLS, JOS N GS
1554 S CAMPBELL
SPRINGFIELD, MO 65804

DOMANN, DARREL D PS
508 MEDICAL TOWER
SPRINGFIELD, MO 65802

DOWELL, J L GP
BOX 39
STRAFFORD, MO 65757

DUNCAN, DOUGLAS M ORS
1550 E SUNSHINE
SPRINGFIELD, MO 65804

DUNCAN, ROBT D GS
1550 E SUNSHINE ST
SPRINGFIELD, MO 65804

ELKINS, RONALD F CRS
2830 E. GLENWOOD ST.
SPRINGFIELD, MO 65804

ELLIS, FRANCIS J OBG
304 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

ELLIS, HARRY L U
115 PROF BLDG
SPRINGFIELD, MO 65806

ENKVETCHAKUL, BOONMEE AN
3573 E WHITEHALL
SPRINGFIELD, MO 65804

EVANS, EZRA L PD
2457 E BARATARIA ST
SPRINGFIELD, MO 65804

FARBER, BARRY S U
609 CHERRY ST
SPRINGFIELD, MO 65806

FARTHING, GENE W GS
2030 S NATIONAL
SPRINGFIELD, MO 65804

FERGUSON, JOHN F NS
234 PROF BLDG
SPRINGFIELD, MO 65806

FERGUSON, JOHN L IM
1550 E SUNSHINE
SPRINGFIELD, MO 65804

FERGUSON, JOHN P OBG
609 CHERRY
304 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

FERRELL, THOS E GS
1550 E SUNSHINE
SPRINGFIELD, MO 65804

FINK, ROGER L PTH
204 MEDICAL TOWER
SPRINGFIELD, MO 65804

FITCH, C H GP
1715 BOONVILLE
SPRINGFIELD, MO 65803

FITE, JAMES E OS
LESTER COX EMERGENCY RO
1423 JEFFERSON
SPRINGFIELD, MO 65802

FOGERSON, VIRGINIA L GP
227 E CHESTNUT EXPRESSWAY
SPRINGFIELD, MO 65802

FOGLE, PHILIP R OBG
1900 S NATIONAL
SPRINGFIELD, MO 65804

FRANCIS, WILLIAM C 600 S GLENSTONE ST SPRINGFIELD, MO 65802	ORS
GASKA, WALTER J 1211 S GLENSTONE SPRINGFIELD, MO 65804	PS
GENTRY, MICHAEL A 1722 K S GLENSTONE SPRINGFIELD, MO 65804	D
GERDES, JOHN A ST JOHNS HOSPITAL SPRINGFIELD, MO 65804	PTH
GERMAN, WALTER A 1211 S GLENSTONE SPRINGFIELD, MO 65804	OBG
GIDDINGS, FRANK C 208 MEDICAL TOWER SPRINGFIELD, MO 65804	R
GILL, PAUL J 1211 S GLENSTONE SPRINGFIELD, MO 65803	IM
GLOVER, JACK F 1550 E SUNSHINE SPRINGFIELD, MO 65804	IM
GOSE, DON F 1550 E SUNSHINE ST SPRINGFIELD, MO 65804	GS
GRACE, STEVE 304 PROFESSIONAL BLDG SPRINGFIELD, MO 65806	OBG
GRIESEMER, BERNARD A 3014 J E SUNSHINE SPRINGFIELD, MO 65804	PD
GUTZMER, ERNEST W 2714 E GLENWOOD SPRINGFIELD, MO 65804	PUD
GWIN, EDWARD 1550 E SUNSHINE SPRINGFIELD, MO 65804	IM
H'DOUBLER, CHAS E 406 MEDICAL TOWER SPRINGFIELD, MO 65802	GS
H'DOUBLER, FRANCIS T 307 MEDICAL TOWER SPRINGFIELD, MO 65802	OS
H'DOUBLER, PETER B 302 PROF BLDG SPRINGFIELD, MO 65806	GS
HAEN, CHAS J 1630 N JEFFERSON SPRINGFIELD, MO 65803	GP
HALL, DAVID W ROUTE 2 ROGERSVILLE, MO 65742	GP
HALL, DURWARD G 2442 S FREMONT SPRINGFIELD, MO 65804	OS
HAMBURG, FREDERIC L 114 PROFESSIONAL BLDG SPRINGFIELD, MO 65806	PD
HANAN, ERNEST B 724 EAST KINGSBURY SPRINGFIELD, MO 65802	PTH
HANSS, ARMAND W 642 S MISSION SPRINGFIELD, MO 65804	IM
HARMON, BEN C 1211 S GLENSTONE ST SPRINGFIELD, MO 65804	ORS
HARRISON, STRATTON W 410 PROF BLDG SPRINGFIELD, MO 65806	OPH
HARVEY, HAROLD D 2030 S NATIONAL SPRINGFIELD, MO 65804	PS
HAWKINS, CALVIN D 4932 S PALMER SPRINGFIELD, MO 65804	R
HEINZ, GEORGE 1900 S NATIONAL SPRINGFIELD, MO 65804	IM
HELLAM, DUANE C 419 PROFESSIONAL SPRINGFIELD, MO 65806	CD
HERFKENS, KENNETH D 1900 S NATIONAL SPRINGFIELD, MO 65804	IM
HILLS, JOE E 1550 E SUNSHINE ST SPRINGFIELD, MO 65804	CD
HINDS, PAUL A TAYLOR HEALTH CLINIC SPRINGFIELD, MO 65802	OBG
HOLLAND, ROBT D 1211 S GLENSTONE SPRINGFIELD, MO 65804	PD
HOLLIS, RICHARD W 609 CHERRY 229 PROFESSIONAL BLD SPRINGFIELD, MO 65806	AN
HOLMES, DANL E RT 9 BOX 191 SPRINGFIELD, MO 65804	IM
HOLMES, DAVID R 3259 E SUNSHINE SUITE N SPRINGFIELD, MO 65804	OBG
HORTON, JAMES D 1235 E DELMAR SPRINGFIELD, MO 65804	ORS
HRNICEK, GARY E 1443 N ROBBERSON SPRINGFIELD, MO 65802	IM
HUBBARD, SALLY L 901 NATIONAL SMSU STUDENT CLINIC SPRINGFIELD, MO 65802	GP
HUEWE, DOUGLAS A 321 PROF BLDG 609 CHERR SPRINGFIELD, MO 65806	D
HUFFT, ROBERT E 600 S GLENSTONE MED VIL SPRINGFIELD, MO 65802	ORS
HULSTRA, JOHANNES F 1211 S GLENSTONE SPRINGFIELD, MO 65802	P
HUSTED, FREDERICK C 1550 E SUNSHINE SPRINGFIELD, MO 65804	IM
IPPENSEN, JOHN H 1900 SOUTH NATIONAL SPRINGFIELD, MO 65804	OTO
ISAAC, ANITA M LESTER E COX MEDICAL CT SPRINGFIELD, MO 65802	PM
IVY, HENRY B 600 S GLENSTONE AVE SPRINGFIELD, MO 65802	OPH
JAMESON, JAMES E 118 PROFESSIONAL BLDG SPRINGFIELD, MO 65806	ORS
JANECZKO, GREGORY F 229 PROFESSIONAL BLDG. SPRINGFIELD, MO 65806	AN
JOBE, CHAS L 1211 S GLENSTONE-S G C SPRINGFIELD, MO 65804	IM
JOHNSON, FRITZ M 1900 S NATIONAL SPRINGFIELD, MO 65804	TS
JOHNSON, GEO A RT #9 BOX 211 SPRINGFIELD, MO 65804	AN
JOHNSON, GEO L 402 MEDICAL TOWER SPRINGFIELD, MO 65802	CRS
JOHNSON, JOS C 1211 S GLENSTONE SPRINGFIELD, MO 65804	OBG
JOHNSON, W B 1443 N ROBBERSON SPRINGFIELD, MO 65802	IM
JOHNSON, WARFORD B 220 PROFESSIONAL BLDG SPRINGFIELD, MO 65804	IM
JOHNSON, WM F 211 PROF BLDG SPRINGFIELD, MO 65806	U
JOHNSTON, JOS L 2855 SOUTHERN HILLS BLV SPRINGFIELD, MO 65806	OBG
JONES, HAROLD L 1550 SUNSHINE SPRINGFIELD, MO 65804	IM
KELL, GARY A 1550 E SUNSHINE SPRINGFIELD, MO 65804	IM
KELLY, JAMES C 1900 S NATIONAL SUITE 2500 SPRINGFIELD, MO 65804	PD
KEY, JAMES S 415 PROFESSIONAL BLDG SPRINGFIELD, MO 65806	D
KHALIL, TAMER G 3259 C EAST SUNSHINE SPRINGFIELD, MO 65804	IM
KINDER, DOYLE O 1211 S GLENSTONE SPRINGFIELD, MO 65804	OS
KIPFER, ROBT E 1550 E SUNSHINE SPRINGFIELD, MO 65804	GE
KISSELL, RICHARD W 600 S GLENSTONE SPRINGFIELD, MO 65804	IM
KLINGNER, GEO M 1630 N JEFFERSON ST SPRINGFIELD, MO 65803	IM
KLINGNER, GEO M 1630 N JEFFERSON ST SPRINGFIELD, MO 65803	GP
KLINKERFUSS, GEO H PROFESSIONAL BLDG - 406 609 E CHERRY SPRINGFIELD, MO 65806	N
KNABB, HENRY F 1630 NORTH JEFFERSON SPRINGFIELD, MO 65803	GP
KNABB, KENNETH E 1630 N JEFFERSON ST SPRINGFIELD, MO 65803	GP
KNOWLTON, NORMAN P D 419 PROFESSIONAL BLDG 609 CHERRY SPRINGFIELD, MO 65806	IM
KOBBERMANN, KOBBY J 1900 S NATIONAL SPRINGFIELD, MO 65804	OBG
KOLZE, VERNON W 600 S. GLENSTONE SPRINGFIELD, MO 65802	GS
KRAHN, HENRY C 208 MEDICAL TOWER SPRINGFIELD, MO 65802	R
LANGSTON, WALTER R 1453 S FAIRWAY AVE SPRINGFIELD, MO 65804	GS
LE FEVRE, PHILIP J 2030 S NATIONAL SPRINGFIELD, MO 65804	P
LEIDINGER, KARL J P O DRAWER Y REPUBLIC, MO 65738	GP
LEMMON, GEO B 407 PROFESSIONAL BLDG SPRINGFIELD, MO 65806	A
LIN, CHI-HSI 3259 K EAST SUNSHINE SPRINGFIELD, MO 65804	N
LISTERMAN, JOHN C SMSU HEALTH CENTER SPRINGFIELD, MO 65801	GP
LITTON, LYLE D 208 MEDICAL TOWER SPRINGFIELD, MO 65802	DR
LOCKHART, CHAS E 609 CHERRY ST 105 PROFESSIONAL BLD SPRINGFIELD, MO 65806	GS
LOEB, RICHARD H 1211 S GLENSTONE SPRINGFIELD, MO 65804	IM
LORENC, ERNEST 321 PROFESSIONAL BLDG SPRINGFIELD, MO 65806	D
LOVETT, ROBERT L 204 MEDICAL TOWER SPRINGFIELD, MO 65802	PTH
LOWE, HORACE A 302 PROFESSIONAL BLDG SPRINGFIELD, MO 65806	OS
LUNDMAN, HUGH J 609 CHERRY 116 PROFESSIONAL BLD SPRINGFIELD, MO 65806	GS
LURIE, HAROLD H 600 S GLENSTONE SPRINGFIELD, MO 65802	IM
LUZECKY, MICHAEL H SUITE 406 PROFESSIONAL 609 CHERRY ST SPRINGFIELD, MO 65806	N
LYNCH, THOS W SUITE 306 PROFESSIONAL SPRINGFIELD, MO 65806	D
MADDUX, WM P 2634 INGLEWOOD RD SPRINGFIELD, MO 65804	PM
MAHER, ROBT W 609 CHERRY 307 PROFESSIONAL BLD SPRINGFIELD, MO 65806	GS
MAJOR, TROY E 1630 N JEFFERSON SPRINGFIELD, MO 65802	D
MANTELL, JACK M 1550 E SUNSHINE SPRINGFIELD, MO 65804	IM
MAPLE, FRANCIS M 1211 S GLENSTONE SPRINGFIELD, MO 65804	GE
MC ALHANY, HOWARD J 609 CHERRY ST 217 PROFESSIONAL BLD SPRINGFIELD, MO 65806	NS
MC CREA, WM A 1211 S GLENSTONE SPRINGFIELD, MO 65804	GP
MC LAUGHLIN, RICHARD D 117 PROFESSIONAL BLDG SPRINGFIELD, MO 65806	OBG
MENCHETTI, DONALD E 1630 N JEFFERSON SPRINGFIELD, MO 65803	GP
MENDEZ, MARIA A 1900 S NATIONAL SPRINGFIELD, MO 65804	P
MENTGEN, CARL N 1550 E SUNSHINE ST SPRINGFIELD, MO 65804	GE
MEYER, JOHN W 1900 S. NATIONAL SPRINGFIELD, MO 65804	PD
MICHAEL, HARVEY R 1211 S GLENSTONE SPRINGFIELD, MO 65804	ORS
MICHAELS, ROBERT 1900 S NATIONAL AVE SPRINGFIELD, MO 65804	OPH
MIHALEVICH, JOHN A 309 PROFESSIONAL SPRINGFIELD, MO 65806	IM
MILLER, DAVID D 1443 N ROBBERSON SPRINGFIELD, MO 65802	GS

MILNE, JAY L U
SUITE 2700
1900 S. NATIONAL
SPRINGFIELD, MO 65804

MIZELL, MYRON W CD
ROOM 309 PROF BLDG
SPRINGFIELD, MO 65806

MOORE, DE A OM
418 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

MORTON, PAUL C IM
1508 E STANFORD
SPRINGFIELD, MO 65804

MOSELEY, FREDERICK T GS
PROF BLDG
SUITE 116
SPRINGFIELD, MO 65806

NAPPER, MARVIN L R
RTE 1 BOX 311
ASH GROVE, MO 65604

NEBLETT, LEWIS M OTO
1211 SOUTH GLENSTONE
SPRINGFIELD, MO 65804

NELSON, DAVID E DR
SUITE 208
MEDICAL TOWER
SPRINGFIELD, MO 65802

NEU, LEO T IM
3008 CARLISLE CIRCLE
SPRINGFIELD, MO 65804

OLSON, ELBERT R OPH
1900 S NATIONAL STE 140
SPRINGFIELD, MO 65804

OVEREND, DONALD S PD
1211 S GLENSTONE ST
SPRINGFIELD, MO 65804

PADDOCK, GEORGE O OPH
1211 S GLENSTONE
SPRINGFIELD, MO 65804

PALCHEFF, CHRIS L PD
1722 SS S GLENSTONE ST
SPRINGFIELD, MO 65804

PARK, WM I IM
209 PROF BLDG
SPRINGFIELD, MO 65806

PENNINGER, WILLIAM H US
600 S GLENSTONE ST
SPRINGFIELD, MO 65802

PETERSON, STANLEY S IM
1211 S GLENSTONE ST
SPRINGFIELD, MO 65804

PFEIFFER, RALPH B JR GS
FERRELL-DUNCAN CLINIC
1550 E SUNSHINE
SPRINGFIELD, MO 65804

PIKER, KENNETH D GP
1525 N CAMPBELL AVE
SPRINGFIELD, MO 65803

PINCKLEY, JAMES N TS
1211 S GLENSTONE
SPRINGFIELD, MO 65804

PODRECCA, GUIDO I PTH
207 PROF BLDG
SPRINGFIELD, MO 65806

POWELL, EDWIN M OS
115 PROF BLDG
SPRINGFIELD, MO 65806

PRATER, BILL G OPH
410 PROF BLDG
SPRINGFIELD, MO 65806

PREVITI, VINCENT GS
1503 S. GLENSTONE
SPRINGFIELD, MO 65804

PRUETT, PAUL L OBG
304 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

QUINN, PAUL S PTH
1423 N JEFFERSON AVE
SPRINGFIELD, MO 65802

RABORAR, ARTESO C PTH
207 PROF BLDG
SPRINGFIELD, MO 65804

RAINWATER, ELMER H OPH
410 PROFESSIONAL BLDG
SPRINGFIELD, MO 65804

RIESENBERG, DONALD E IM
1900 S NATIONAL
SPRINGFIELD, MO 65804

RISING, DEAN R PD
1211 S GLENSTONE
SPRINGFIELD, MO 65804

ROBINSON, GARY L OBG
404 E BATTLEFIELD RD
SPRINGFIELD, MO 65801

RUFF, PAUL G TS
1211 S GLENSTONE
SPRINGFIELD, MO 65804

RUSSELL, EARL D GP
1500 S GLENSTONE ST
SPRINGFIELD, MO 65804

RYAN, ROBERT A GP
2523 EAST BROADMOOR
SPRINGFIELD, MO 65804

SAMMON, THOS J PD
3014J E SUNSHINE
SPRINGFIELD, MO 65804

SAUER, PAUL E TS
504 MEDICAL TOWER
SPRINGFIELD, MO 65802

SCANLON, ROBT C GP
2145 E EDGEWOOD
SPRINGFIELD, MO 65804

SCHAEFFER, EDWARD M OPH
2900 S FREMONT
SPRINGFIELD, MO 65804

SCHNARR, WILLIAM IM
3618 HOPI TRAIL
TEMPLE, TX 76501

SCHREIBER, NORMAN J GP
1211 S GLENSTONE
SPRINGFIELD, MO 65804

SCHROFF, CARLE H GP
1630 N JEFFERSON ST
SPRINGFIELD, MO 65803

SCHWARTZ, EUGENE J A
609 CHERRY ST
317 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

SHACKTER, BRUCE I ORS
1550 E SUNSHINE ST
SPRINGFIELD, MO 65804

SHAEFFER, JAMES T ORS
118 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

SHANE, RAMON A TS
1900 S NATIONAL
SPRINGFIELD, MO 65804

SHELTON, ROY W OPH
1211 S GLENSTONE
SPRINGFIELD, MO 65804

SHIELDS, LAWRENCE S D
SMSU TAYLOR HEALTH CTR
SPRINGFIELD, MO 65802

SICELUFF, JOS G U
SUITE 2700
1900 S. NATIONAL
SPRINGFIELD, MO 65804

SILSBY, DON J GS
401 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

SILSBY, HARRY D P
1369 SOUTH FAIRWAY AVE
SPRINGFIELD, MO 65804

SIMPSON, ALBERT P GP
SE MED BLDG 1636 S GLEN
SPRINGFIELD, MO 65804

SIMPSON, EMERSON L GP
1630 N JEFFERSON ST
SPRINGFIELD, MO 65803

SMITH, CARLIE B OS
1223 S KENTWOOD
SPRINGFIELD, MO 65804

SNEAD, WILLIAM H ORS
307 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

SNOW, EMASUE P
2030 SOUTH NATIONAL
SPRINGFIELD, MO 65804

SOLEM, DANA L P
RT 1 BOX 42
HIGHLANDVILLE, MO 65669

SPALDING, DAVID L OPH
1900 S NATIONAL RD-STE
SPRINGFIELD, MO 65804

SPONENBERG, DON D PD
1211 S GLENSTONE ST
SPRINGFIELD, MO 65804

STAMATIS, JOHN J TS
1900 S NATIONAL
SUITE 2600
SPRINGFIELD, MO 65804

STEHR, CHRISTIAN H AN
609 CHERRY
229 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

STEWART, R W GP
609 E CHERRY ST
219 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

STEWART, ROBT B OTO
2360 EAST GRAND
SPRINGFIELD, MO 65804

STUBBLEFIELD, WAYNE GP
2740 S GLENSTONE
SPRINGFIELD, MO 65804

STUFFLEBAM, ROBT E IM
2323 E ROSEBRIER
SPRINGFIELD, MO 65804

STURTEVANT, HARWOOD N R
609 CHERRY
403 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

SULLIVAN, DAN T R
609 CHERRY ST
403 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

SUNDSTROM, FRANK D ORS
1211 S GLENSTONE ST
SPRINGFIELD, MO 65802

SUVA, MORFEO M US
2030 S. NATIONAL
SPRINGFIELD, MO 65804

SWEENEY, THOS P DR
403 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

TARRASCH, ERNEST L OPH
1636 S GLENSTONE AVE
SPRINGFIELD, MO 65804

TAYLOR, WM E GP
1701 RANCH DRIVE
SPRINGFIELD, MO 65802

TENDAI, MARK M OBG
505 MEDICAL TOWER
SPRINGFIELD, MO 65802

TERRY, JAMES F U
115 PROF BLDG
SPRINGFIELD, MO 65806

THOMASSON, DAVID D PD
600 S GLENSTONE
SPRINGFIELD, MO 65802

TILLMAN, WALTER W AN
229 PROF BLDG
SPRINGFIELD, MO 65806

TOMBRIDGE, THOS L IM
1235 E CHEROKEE
ST JOHN'S HOSPITAL
SPRINGFIELD, MO 65804

TROTTER, WM Y IM
1243 E CATALPA
SPRINGFIELD, MO 65804

TROXIL, ELIZABETH B US
1000 E ELM
APT 3
SPRINGFIELD, MO 65806

TSANG, JOHN L NS
3259 G EAST SUNSHINE
SPRINGFIELD, MO 65804

TURNER, GLENN O IM
609 CHERRY
SPRINGFIELD, MO 65806

VENSEL, LEE H PD
114 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

WACHTER, RONALD M PTH
DEPT PATHOLOGY
COX MEDICAL CENTER
SPRINGFIELD, MO 65804

WADDELL, KENNETH E US
1211 S GLENSTONE
SPRINGFIELD, MO 65804

WAKEMAN, J N GS
1402 E. MEADOWMERE
SPRINGFIELD, MO 65802

WAKEMAN, NEWT ORS
1900 S NATIONAL ST
SPRINGFIELD, MO 65804

WALKER, GARY OBG
117 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

WALKER, WM M OBG
609 CHERRY ST
17 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

WANTUCK, DONALD K IM
609 CHERRY
309 PROFESSIONAL BLD
SPRINGFIELD, MO 65804

WARRES, HERBERT L U
609 CHERRY ST
230 PROFESSIONAL BLD
SPRINGFIELD, MO 65806

WATERFIELD, JIM R IM
1211 S GLENSTONE
SPRINGFIELD, MO 65801

WHITE, R N OBG
301 MEDICAL TOWER
SPRINGFIELD, MO 65802

WHITLOCK, C C NS
405 MEDICAL TOWER
SPRINGFIELD, MO 65802

WILLIAMS, JOHN W IV OBG
404 E. BATTLEFIELD
SPRINGFIELD, MO 65807

WILSON, ROY E P
1211 S GLENSTONE
SPRINGFIELD, MO 65804

WINSKY, ARLEN D PS
508 MEDICAL TOWER
SPRINGFIELD, MO 65802

WISE, GORDON F AN
229 PROF BLDG
SPRINGFIELD, MO 65806

WITTMER, SAML C GS
600 S GLENSTONE ST
SPRINGFIELD, MO 65802

WOLF, MARION L ORS
1211 S GLENSTONE
SPRINGFIELD, MO 65804

WOLFE, JAMES B OTO
SUITE 410
PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

WONG, GEO N
2030 S NATIONAL
SPRINGFIELD, MO 65804

WOOLDRIDGE, WILFRED E D
321 PROF BLDG
SPRINGFIELD, MO 65806

WOOTEN, MICHAEL B GE
1211 S GLENSTONE
SPRINGFIELD, MO 65804

WYRSCH, LEO M OBG
304 PROFESSIONAL BLDG
SPRINGFIELD, MO 65806

YANCEY, DANIEL L ORS
1211 S GLENSTONE ST
SPRINGFIELD, MO 65804

ZAHN, ROBT L 1900 S NATIONAL STE 190 SPRINGFIELD, MO 65804	PD

086—HENRY

HOLLINGSWORTH, RAY S MEDICAL BLDG HOSPITAL D CLINTON, MO 64735	GP
HUGHES, SHELBY B 210 E WILSON CLINTON, MO 64735	GP
JONES, EDNA M RT #2 DEEPWATER, MO 64740	OS
KING, RICHARD H HOSPITAL DR C/O MEDICAL CLINIC CLINTON, MO 64735	GS
SCOTT, KENNETH F MED BLDG-HOSPITAL DR CLINTON, MO 64735	GP
SMITH, JAMES O MEDICAL BLDG HOSPITAL D CLINTON, MO 64735	GP
SMITH, WM J 103 W COLT ST WINDSOR, MO 65360	GP
WELTSCHEFF, CHRISTO A 120 S MAIN WINDSOR, MO 65360	GP
WETZEL, GUS S ROUTE 4 CLINTON, MO 64735	GS

094—HOWARD

DEAN, FRANCIS D 300 N CHURCH ST FAYETTE, MO 65248	GP
LEECH, MAURICE P 300 N CHURCH FAYETTE, MO 65248	OS
MARSHALL, WILLIAM G GLASGOW MED CTR GLASGOW, MO 65254	US
SHAW, WM J 300 N CHURCH ST FAYETTE, MO 65248	GP

098—JACKSON

AARON, GEO 1515 W TRUMAN RD INDEPENDENCE, MO 64050	U
ABAQUETA, GAMALIEL P 1220 W 64TH TERR KANSAS CITY, MO 64113	AN
ABDOU, NANCY L 415 PENN PARK 2929 BALTIMORE KANSAS CITY, MO 64108	IM
ABELLA, BIENVENIDO Z 416 MAIN ST. BELTON, MO 64012	GS
ABEND, MELVIN N 6724 TROOST KANSAS CITY, MO 64131	GS
ABERCROMBIE, KEITH J 1010 CARONDELET DR KANSAS CITY, MO 64114	U
ABRAMS, BERNARD M P O BOX 7252 KANSAS CITY, MO 64113	N
ABRAMSON, SARA J 900 HIGHLAND PROF TOWER 6724 TROOST KANSAS CITY, MO 64131	DR
ADELMAN, ARTHUR 6724 TROOST SUITE 910 KANSAS CITY, MO 64131	GS
ADLER, FEDERICO 6724 TROOST AVE KANSAS CITY, MO 64131	ORS
AGEE, LOREN G RT 1 RANTOUL, KS 66079	GP
AKIN, C. D 1515 W. TRUMAN RD. INDEPENDENCE, MO 64050	CD
AKS, DANL 6724 TROOST KANSAS CITY, MO 64131	OBG
ALBERG, MARVIN R 3525 N W 60TH TERRACE KANSAS CITY, MO 64151	OS
ALDERMAN, DONALD P 3221 W 83RD ST SHAWNEE MISSION, KS 66206	AN
ALDERMAN, THOS F 1010 CARONDELET SUITE 1 KANSAS CITY, MO 64114	GS
ALDRIDGE, JOHN 266 DOCTORS BLDG EAST 751 EAST 63RD ST KANSAS CITY, MO 64110	OBG
ALFIE, SALOMON 4400 BROADWAY SUITE 202 KANSAS CITY, MO 64111	P
ALLEBACH, HOBART K 6400 PROSPECT AVE KANSAS CITY, MO 64132	PTH
ALLEN, ARTHUR A II 210 FOXHILL MED. BLDG. 4601 W. 109TH ST. SHAWNEE MISSION, KS 66211	N
ALLEN, ROBT E 4320 WORNALL RD KANSAS CITY, MO 64111	GS
ALMQUIST, L A BAPTIST MEM HOSP 6601 ROCKHILL RD. KANSAS CITY, MO 06431	FP
ALSOP, WEBB S 6400 PROSPECT KANSAS CITY, MO 64132	AN
ALTOMARE, EDWARD P 1030 W 65TH ST KANSAS CITY, MO 64113	AN
AMMATELLI, FRANCIS J 412 ST JOSEPH MEDICAL B 1010 CARONDELET DR KANSAS CITY, MO 64114	OM
AMOURY, RAYMOND A CHILDRENS MERCY HOSPITA 24TH & GILLHAM RD KANSAS CITY, MO 64108	GS
ANDERSON, RAYMOND B 24TH GILLHAM RD KANSAS CITY, MO 64108	PD
ANDRUS, BAILEY C 4400 BROADWAY KANSAS CITY, MO 64111	PD
ANTHONY, JAMES P 3807 WEST 171ST ST STILWELL, KS 66085	DR
ARBAB, ALI A 751 E 63RD ST KANSAS CITY, MO 64110	IM
ARMS, ARNOLD V 450 N PRYOR RD LEE'S SUMMIT, MO 64063	IM
ARMS, RICHARD A 4240 BLUE RIDGE BLVD KANSAS CITY, MO 64133	PUD
ARNOLD, JOHN D 5101 E 24TH ST KANSAS CITY, MO 64127	US
ARRIBAS, AURORA I 1000 S 42ND BLUE SPRINGS, MO 64015	GP
ARRIBAS, ROMEO F 1212 LUTTRELL BLUE SPRINGS, MO 64015	GS
ARSENOVIC, ALEXANDER KANSAS CITY MEDICAL CEN 917 MC GEE ST KANSAS CITY, MO 64106	GP
ASHBY, JENNIFER D TRUMAN MED CENTER 24TH AND HOLMES KANSAS CITY, MO 64108	D
ASHCRAFT, KEITH W 509 BROADWAY MED BLDG 4400 BROADWAY KANSAS CITY, MO 64111	GS
ASHER, A G 2102 CHIPMAN RD LEE'S SUMMIT, MO 64063	CD
ASHLEY, JOHN T TRUMAN MEDICAL CENTER 2301 HOLMES KANSAS CITY, MO 64108	PH
ASHLEY, LILLARD G A SUITE 505 1734 E 63RD S KANSAS CITY, MO 64110	CD
ATWELL, FLOYD C 4320 WORNALL RD KANSAS CITY, MO 64111	OBG
AUSTIN, GEORGE M 1515 W. TRUMAN RD. SUITE 404 INDEPENDENCE, MO 64050	U
AVERILL, KEITH H 1010 CARONDELET DRIVE SUITE 110 KANSAS CITY, MO 64114	CD
BADAMO, FRANCIS P 17221 E 23RD ST INDEPENDENCE, MO 64057	GS
BAER, ALVIN J 751 E 63D ST KANSAS CITY, MO 64110	OPH
BAILEY, HUGH R 4320 WORNALL RD KANSAS CITY, MO 64111	D
BAKER, PHILIP J 9306 E NEW 40TH HWY INDEPENDENCE, MO 64050	GP
BALLARD, V B 4320 WORNALL RD KANSAS CITY, MO 64111	IM
BANKUTI, FERENC RESEARCH MED OFF BLDG S 6400 PROSPECT KANSAS CITY, MO 64132	R
BARE, CHESTER I 9406 E 63RD KANSAS CITY, MO 64133	PD
BARELLI, PAT A 2929 BALTIMORE STE 105 KANSAS CITY, MO 64108	OTO
BARLOON, JAMES H 240 ROCKHILL MED. BLDG. 6700 TROOST KANSAS CITY, MO 64131	OBG
BARNARD, JOHN L 4320 WORNALL RD KANSAS CITY, MO 64111	ORS
BARNETT, DANIEL K 12921 GRANDVIEW RD GRANDVIEW, MO 64030	IM
BARNETT, GORDON P 6568 HIGH DR SHAWNEE MISSION, KS 66208	GP
BARR, GLENN A 6724 TROOST SUITE 910 KANSAS CITY, MO 64131	GS
BARRY, GERALD W 3231 N 61 KANSAS CITY, KS 66104	IM
BARRY, WM B 4320 WORNALL RD KANSAS CITY, MO 64111	OTO
BARTER, BRUCE 8542 BROADMOOR OVERLAND PARK, KS 66212	PO
BARTON, JEAN C CHILDRENS MERCY HOSP 24TH AND GILLHAM RD KANSAS CITY, MO 64108	PO
BASANTZ, FERNANDO V 11201 COLORADO KANSAS CITY, MO 64134	GP
BASKA, RICHARD E CHILDRENS MERCY HOSP KANSAS CITY, MO 64108	N
BASS, WALTER R 8800 E 63RD ST RAYTOWN, MO 64133	OPH
BATTMER, ROBT E 101 BROADWAY MED BLDG 4400 BROADWAY KANSAS CITY, MO 64111	OBG
BAUER, LAFE W 4818 W 80TH PRAIRIE VILLAGE, KS 66208	AN
BAUM, FRANK E 6724 TROOST AVE KANSAS CITY, MO 64131	OBG
BAY, MERRILL R 301 WOODS CHAPEL RD BLUE SPRINGS, MO 64015	OM
BAYER, WILLIAM L 4040 MAIN KANSAS CITY, MO 64111	OS
BEALL, MC PHERSON S 1010 CARONDELET DR. #426 KANSAS CITY, MO 64114	ORS
BEARD, WM J 8940 BLUE JACKET APT 11 SHAWNEE MISSION, KS 66214	IM
BEATTY, EUGENE C 24TH GILLHAM RD KANSAS CITY, MO 64108	PTH
BEATTY, NINA D TRUMAN MEDICAL CTR 2301 HOLMES KANSAS CITY, MO 64108	AN
BEAUCHAMP, GARY D 4320 WORNALL ROAD KANSAS CITY, MO 64111	IM
BECK, CALVIN E 4320 WORNALL RD KANSAS CITY, MO 64111	U
BECKER, RICHARD R 5622 HOLMES ST KANSAS CITY, MO 64110	GP
BECKER, ROLFE A 6724 TROOST AVE SUITE 8 KANSAS CITY, MO 64131	OPH
BEEKS, JOHN W 522 PROFFESSIONAL BLDG 1103 GRAND KANSAS CITY, MO 64106	OM
BEHRENDS, STEVEN H 1010 CARONDELET SUITE 120 KANSAS CITY, MO 64114	GS
BELL, HUBERT H 4320 WORNALL RD KANSAS CITY, MO 64111	CO
BELL, WM F 615 WEST 3RD STREET LEE'S SUMMIT, MO 64063	GP
BENNETT, JAMES D 6700 TROOST KANSAS CITY, MO 64131	IM
BENOIT, HECTOR W 4620 J C NICHOLS PKWY KANSAS CITY, MO 64112	TS
BENSON, GEORGE N 2525 EUCLID KANSAS CITY, MO 64127	DR
BENSON, WILLIAM F 4320 WORNALL RD KANSAS CITY, MO 64111	GS

BERENSON, SHELDON E R
832 WEST 63RD STREET
KANSAS CITY, MO 64113
BERGMANN, VICTOR H IM
105 WARD PARKWAY
KANSAS CITY, MO 64112
BERLIN, ROGER P
751 E 63RD RD
KANSAS CITY, MO 64110
BERRY, MAXWELL G IM
4320 WORNALL RD
KANSAS CITY, MO 64111
BETTINGER, IRENE E N
4310 WORNALL RD.
SUITE 432
KANSAS CITY, MO 64111
BICKLEY, JAMES E OBG
328 ST JOSEPH MED BLDG
1010 CARONDELET DR
KANSAS CITY, MO 64114
BIDNICK, TERRANCE A OM
WESTERN ELECT. MED. DEPT
777 N. BLUE PARKWAY
LEE'S SUMMIT, MO 64063
BIDWELL, JO J P
4320 WORNALL
KANSAS CITY, MO 64111
BIDWELL, ROBT E P
4320 WORNALL RD STE 704
KANSAS CITY, MO 64111
BIERY, RICHARD M GPM
K C MO HEALTH DEPT
414 E 12TH ST
KANSAS CITY, MO 64106
BIGGS, ALFRED D IM
6400 PROSPECT AVE.
SUITE 333
KANSAS CITY, MO 64132
BIGGS, HARRY L GP
1913 QUAIL TRAIL
LEE'S SUMMIT, MO 64063
BILLS, MARVIN L N
3309 W 68TH ST
SHAWNEE MISSION, KS 66208
BINDA, ROBERT E AN
142 RESEARCH MEDICAL OF
6400 PROSPECT AVE
KANSAS CITY, MO 64132
BLACK, DON A IM
6400 PROSPECT ST
KANSAS CITY, MO 64132
BLACK, EUGENE C OM
3201 W 67TH ST
SHAWNEE MISSION, KS 66208
BLACK, ROSS R FP
1740 W 92ND STREET
KANSAS CITY, MO 64114
BLACK, THOMAS C OPH
1010 CARONDELET DR
SUITE 416
KANSAS CITY, MO 64114
BLIM, RICHARD D PD
4400 BROADWAY
KANSAS CITY, MO 64111
*BLUM, MICHAEL A PD
373 W 101ST TERR
KANSAS CITY, MO 64114
BODENHAUSEN, GARY E GP
9503 E 63RD ST
KANSAS CITY, MO 64133
BOGART, DOUGLAS B IM
415 PENN PARK
2929 BALTIMORE
KANSAS CITY, MO 64108
BONO, GREGORY L US
ST. LUKE'S HOSP
44TH & WORNALL RD
KANSAS CITY, MO 64111
BORDY, MARVIN D PD
601 E 63RD ST
KANSAS CITY, MO 64110
BORENSTINE, JOS PD
601 E 63RD ST
KANSAS CITY, MO 64110
BORKAR, C J AN
DEPT OF ANESTHESIA
24TH AND GILLHAM RD.
KANSAS CITY, MO 64108
BORSUK, GREGORY M D
535 BLUE RIDGE TOWER
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
BORTNICK, EUGENE PS
6724 TROOST AVE STE 200
KANSAS CITY, MO 64131
BOTWIN, ARNOLD E GS
404 HIGHLANDS PROF TWR
6724 TROOST
KANSAS CITY, MO 64131
BOWSER, JOHN F R
4320 WORNALL NO 128
KANSAS CITY, MO 64111
BOYD, GEO K IM
4320 WORNALL RD
KANSAS CITY, MO 64111
BOYER, PHILIP A IM
13013 FULLER AVE
GRANDVIEW, MO 64030

BOYLAN, PETER C ORS
6306 MORNINGSIDE DR
KANSAS CITY, MO 64113
BRABY, HOWARD H OBG
1515 W TRUMAN RD-STE 30
INDEPENDENCE, MO 64050
BRADFORD, JOHN F OPH
4320 WORNALL ST
KANSAS CITY, MO 64111
BRAMS, JACK B IM
601 E 63RD ST STE 508
KANSAS CITY, MO 64110
BRAND, STANLEY N GE
STATLAND CLINIC
6724 TROOST-SUITE 71
KANSAS CITY, MO 64131
BRAUN, WILLIAM J PD
CHILDREN'S MERCY HOSPITAL
24TH GILLHAM RD
KANSAS CITY, MO 64108
BRAVERMAN, ABE E IM
8300 TROOST
KANSAS CITY, MO 64131
BRICK, JEFFREY M OPH
6724 TROOST STE 504
KANSAS CITY, MO 64131
BROCK, ARTHUR L GE
1516 W. TRUMAN RD
INDEPENDENCE, MO 64050
BRODKEY, MARK J U
6400 PROSPECT AVE
KANSAS CITY, MO 64132
BROOK, CHARLES J PUD
400 HIGHLANDS PROF. BLDG.
6724 TROOST
KANSAS CITY, MO 64131
BROWER, CLYDE L GP
17421 MEDICAL CENTER PA
INDEPENDENCE, MO 64052
BROWN, ADRIAN J GP
12 EAST 63RD ST
KANSAS CITY, MO 64113
BROWN, ELWYN S AN
24TH AND GILLHAM RD
KANSAS CITY, MO 64108
BROWN, IRWIN S U
RR #1
LA CYGNE, KS 66040
BROWN, MENZIE H R
2929 BALTIMORE AVE
SUITE 340
KANSAS CITY, MO 64108
BROWN, ROBT S OBG
2929 BALTIMORE STE 200
KANSAS CITY, MO 64108
BROWN, VIOLETA O CHP
CHILDRENS MERCY HOSP
KANSAS CITY, MO 64108
BROWNE, JON E ORS
6306 MORNINGSIDE DR
KANSAS CITY, MO 64113
BRUMM, LAWRENCE W IM
6400 PROSPECT ST
KANSAS CITY, MO 64132
BRUNER, ROBT E N
14909 LITTLE BLUE RD
KANSAS CITY MO 64136
BRYAN, WM H GS
3939 PROSPECT
KANSAS CITY, MO 64130
BRYANT, T J IM
751 E 63RD ST SUITE #1B
KANSAS CITY, MO 64110
BUCHANAN, BARBARA N CHP
4400 BROADWAY
KANSAS CITY, MO 64111
BUCKNER, ROBT C OBG
328 ST JOSEPH MED BLDG
1010 CARONDELET DR
KANSAS CITY, MO 64114
BUDKE, HAROLD A GP
306 E 12TH ST
KANSAS CITY, MO 64106
BUHLER, VICTOR B PTH
APT. 1004
2510 GRAND AVE.
KANSAS CITY, MO 64108
BUIE, BRUCE R US
11201 COLORADO
KANSAS CITY, MO 64137
BUNTING, WILLISTON P OTO
1231 W 62ND
KANSAS CITY, MO 64113
BURRY, VIRGIL F PD
CHILDRENS MERCY HOSP
KANSAS CITY, MO 64108
BUSTOS, JONAS G GS
1212 LUTTRELL RD
BLUE SPRINGS, MO 64015
BUTCHER, ROBT W IM
7924 PASEO ST
KANSAS CITY, MO 64131
BUTT, ATTA U P
SUITE 11
751 E. 63RD ST.
KANSAS CITY, MO 64110
BUTTERWORTH, NELSON S IM
725 W 49TH TERRACE
KANSAS CITY, MO 64112

BYARS, STEVEN R OPH
6724 TROOST SUITE 202
KANSAS CITY, MO 64131
CABANAS, JUSTO J P
11 BLUE RIDGE TOWER
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
CAFFREY, RAYMOND J PTH
1314 W RED BRIDGE RD
KANSAS CITY, MO 64114
CAIN, A S CD
6700 TROOST
SUITE 34B
KANSAS CITY, MO 64131
CALDWELL, JOHN K IM
6700 TROOST
KANSAS CITY, MO 64131
CALOVICH, EMERY R PUD
4620 J C NICHOLS PKWY
KANSAS CITY, MO 64112
CAMACHO, HOMERO OBG
10505 WEDD
SHAWNEE MISSION, KS 66212
CAMPBELL, FREDERICK B CRS
315 NICHOLS RD
KANSAS CITY, MO 64112
CAMPBELL, JOHN G CRS
6724 TROOST-STE 510
KANSAS CITY, MO 64131
CANENT, RAMON V CD
24TH & GILLHAM RD
KANSAS CITY, MO 64108
CAPPS, EUGENE C AN
7921 EL MONTE
SHAWNEE MISSION, KS 66208
CARLSON, HJALMAR E U
525 PENN PARK MED CTR
2929 BALTIMORE
KANSAS CITY, MO 64108
CARLSON, JOHN S PD
4400 BROADWAY STE 206
KANSAS CITY, MO 64111
CARTER, JAMES E GP
1734 E 63RD ST STE 410
KANSAS CITY, MO 64110
CARUSO, ALFRED A OBG
1027 E 75TH WAY
KANSAS CITY, MO 64131
CASE, WM F OPH
416 CARONDELET MEDICAL
1010 CARONDELET DR
KANSAS CITY, MO 64114
CASHMAN, JOHN W GP
6400 PROSPECT
316 RESEARCH MED BLDG.
KANSAS CITY, MO 64132
CATLETT, JACK M IM
4400 BROADWAY
SUITE 31
KANSAS CITY, MO 64111
CATTANEO, ERNEST A IM
2929 BALTIMORE
KANSAS CITY, MO 64108
CENTNER, PAUL J GS
2727 MAIN ST
KANSAS CITY, MO 64108
CHANDLER, ROBT A PS
4177 BROADWAY
KANSAS CITY, MO 64111
CHANDRA, MAHESH IM
1515 W TRUMAN RD STE 30
INDEPENDENCE, MO 64050
CHANG, DAVID Y AN
101 MEMORIAL DR
KANSAS CITY, MO 64108
CHAPMAN, DAVID W GP
1515 W TRUMAN RD STE 30
INDEPENDENCE, MO 64050
CHAUDHARY, MOHAMMAD A GE
751 E 63RD ST STE 751
KANSAS CITY, MO 64110
CHAUDHURI, SUDHA T OBG
1001 E 47TH ST
KANSAS CITY, MO 64110
CHAUDHURI, TAPAN K IM
9406 E 63RD ST
KANSAS CITY, MO 64133
CHEN, STUART GE
2411 HOLMES
KANSAS CITY, MO 64108
CHERNOFF, SELBERT G IM
4601 INDEPENDENCE AVE
KANSAS CITY, MO 64124
CHILDS, DONNALEA S CHP
4400 BROADWAY
KANSAS CITY, MO 64111
CHILDS, RICHARD M P
4320 WORNALL RD STE 452
KANSAS CITY, MO 64111
CHOWDHURY, DIPAK OS
17221 E 23RD ST
INDEPENDENCE, MO 64057
CHUNG, RICHARD T IM
1212 SOUTH LUTTRELL
BLUE SPRINGS, MO 64015
CHURCHILL, STEPHEN W CHP
4400 BROADWAY
KANSAS CITY, MO 64111

---

* Doctor of Osteopathy

C1DIS, GERHARD W OPH
421 PLAZA MEDICAL 8LDG
4620 JC NICHOLS PARK
KANSAS C1TY, MO 64112
CLARK, GRANVILLE E PD
3718 PROSPECT
KANSAS CITY, MO 64128
CLARK, IRVING H GP
2811 BLUE RIDGE
GRANDVIEW, MO 64030
CLINE, MERLE A GP
4126 ST JOHN AVE
KANSAS CITY, MO 64123
CLDTHIER, ROBT W PD
17221 E 23RD STE 206
INDEPENDENCE, MO 64057
CLOUGH, CHAS A NS
4440 BROADWAY
KANSAS CITY, MO 64111
COBB, JAMES R GP
2379 N. ST. CLAIR
SIMI VALLEY, CA 93063
CDBURN, DONALD F NS
SUITE 112
2401 PENNSYLVANIA AVE
WILM1NGTON, DE 19806
COCHRANE, JOS J GS
2929 BALTIMORE AVE
KANSAS CITY, MO 64108
COCKERELL, SANFORD F PD
11200 WINNER RD
INDEPENDENCE, MO 64052
COFFEY, RALPH R GS
5211 WORNALL RD
KANSAS CITY, MO 64112
COFF1N, THEDDORE A OBG
6415 SAGAMDRE ROAD
SHAWNEE M1SS1ON, KS 66208
COHEN, HARRY K GP
751 E 63D ST
KANSAS CITY, MD 64110
COHEN, LAWRENCE S CD
4949 ROCKHILL RD
KANSAS C1TY, MO 64110
COHEN, MARVIN C GS
7521 BOOTH DR.
SHAWNEE MISSIDN, KS 66208
CDK1NGTIN, LEOV1GILDO C PD
1515 W TRUMAN RD
INDEPENDENCE, MO 64050
COLE, SHERMAN W P
221 PLAZA TIME BLDG
KANSAS CITY, MO 64112
COLEMAN, ROBT L PS
4231 BROOKRIDGE DR
SHAWNEE MISSION, KS 66205
COLGLAZIER, MARY C IM
411 N1CHOLS ROAD
KANSAS CITY, MO 64112
COLL1NS, JOHN W ORS
1734 E 63RD ST
KANSAS CITY, MO 64110
COLOM, GEO A P
602 HIGHLANDS PRDF TOWE
6724 TROOST
KANSAS CITY, MD 64131
CONN, ROBT D CD
4320 WORNALL ROAD
KANSAS CITY, MO 64111
COPPINGER, THOS A IM
2929 BALTIMORE AVE SU1T
KANSAS CITY, MO 64108
CORTNER, MARY C GP
6700 TROOST ST SUITE 22
KANSAS C1TY, MO 64131
COTTON, THOS R OTO
3725 BROADWAY
KANSAS CITY, MO 64111
COWAN, GEO A TR
6724 TROOST SUITE 407
KANSAS CITY, MO 64131
COX, KENNETH E OBG
4320 WORNALL DR
KANSAS CITY, MO 64111
COX, WM L A
1212 W TRUMAN RD
1NDEPENDENCE, MO 64050
CROCKETT, JAMES E CD
4320 WORNALL RD
KANSAS CITY, MO 64111
CROUCH, THOS T IM
4320 WORNALL RD
KANSAS C1TY, MO 64111
CROW, MART1N L PS
408 BROADWAY MED BLDG
4400 BROADWAY
KANSAS CITY, MO 64111
CURRAN, M D OPH
109 BROADWAY MED BLDG
4400 BROADWAY
KANSAS CITY, MO 64111
CURRAN, TERRENCE OPH
4400 BROADWAY 8LDG
KANSAS C1TY, MO 64111
CURTS, CALV1N J OPH
4320 WORNALL RD
KANSAS C1TY, MO 64111
CUTCL1FF, DANL J 1M
6700 TROOST
KANSAS C1TY, MO 64131

DALTON, T1MOTHY T AN
11841 OAK ST
KANSAS CITY, MO 64114
DARNELL, DALE E ORS
4320 WDRNALL RD
KANSAS CITY, MO 64111
DAVIDNER, MARK L 1M
8300 TROOST
KANSAS CITY, MO 64131
DAVIDSON, KENDRICK C R
4320 WDRNALL
KANSAS CITY, MO 64111
DAVIS, DONALD R GS
4320 WDRNALL RD
KANSAS CITY, MO 64111
DAV1S, HERBERT V PD
4400 BROADWAY
KANSAS CITY, MO 64111
DAV1S, JACK M IM
6700 TROOST
KANSAS CITY, MD 64131
DAV1S, JOHN M IM
ROCKHILL MEDICAL BLDG.
6700 TROOST
KANSAS CITY, MO 64131
DAVIS, KENNETH A GP
3228 EUCLID
KANSAS CITY, MO 64109
DAVIS, W B DR
340 PENN PARK MED CENTE
2928 MAIN
KANSAS CITY, MO 64108
DAY, CHESTER L P
4706 BROADWAY
KANSAS CITY, MO 64112
DE FEO, THEODORE C PTH
WORNALL RD AT 44TH ST
KANSAS CITY, MO 64111
DE MOTT, JDHN D P
3618 SUNRISE DR.
SEBRING, FL 33870
DEEKEN, JAMES H D
411 NICHOLS RD STE 170
KANSAS CITY, MO 64112
DEMPSEY, HER8ERT A GP
615 W 3RD ST
LEE'S SUMMIT, MO 64063
DENNER, LEE J
704 MEDICAL PL
KANSAS CITY, MO 64111
DESHMUKH, MURL1DHAR R IM
9406 E 63RD ST
KANSAS CITY, MO 64133
DEVINS, GEORGE S PUD
701 E 63RD ST
KANSAS CITY, MO 64110
DIEHL, ANTONI M PDC
4320 WORNALL ROAD
618 MEDICAL PLAZA
KANSAS CITY, MO 64111
D1MOND, E G CD
2501 HOLMES ST
KANSAS C1TY, MO 64108
D1VELEY, REX L ORS
4320 WORNALL RD
KANSAS CITY, MO 64111
DIXON, GEO D DR
710 MEDICAL PLAZA
4320 WORNALL RD.
KANSAS CITY, MO 64111
D1XON, VEWISER L GP
2202 E 18TH ST
KANSAS CITY, MO 64127
DLABAL, LUKE J JR OTO
SUITE 205
17221 E. 23RD ST.
1NDEPENDENCE, MO 64057
DLABAL, LUKE J SR OTO
1210 ASH
INDEPENDENCE, MO 64052
DODGE, MARK IM
4320 WORNALL RD STE 208
KANSAS C1TY, MO 64111
DODHIA, RAT1LAL L PTH
TRUMAN MEDICAL CENTER
2301 HOLMES
KANSAS CITY, MO 64108
DOERING, ROBT W GS
6400 PROSPECT
KANSAS CITY, MO 64132
DOMBEK, STANLEY J GS
330 PENN PARK
2929 BALTIMORE
KANSAS CITY, MO 64108
DONOHOE, CHARLES D N
17221 E 23RD ST
INDEPENDENCE, MO 64057
DORSCH, ERVIN H GP
LAKE CITY ARMY AMMUNITI
INDEPENDENCE, MO 64050
DORZA8, WILLIAM E PTH
MENORAH MED1CAL CENTER
4949 ROCKH1LL RD
KANSAS CITY, MO 64110
DOWNEY, JAMES W GP
2929 BALTIMORE
KANSAS CITY, MO 64108

DRAKE, ROY F GS
236 ROCKHILL MED. BLDG.
6700 TROOST
KANSAS CITY, MO 64131
DRANEY, THOS E PD
6426 HOLMES
KANSAS CITY, MO 64131
DREHER, RICHARD L PD
CHILDREN'S MERCY HOSP
KANSAS CITY, MO 64108
DRISKO, ROBERT M DRS
2929 BALTIMORE AVE
KANSAS C1TY, MO 64108
DROWNS, BRUCE V D
4320 WORNALL RD
KANSAS CITY, MO 64111
DUB1N, SOL H ORS
SUITE 401
1515 W TRUMAN RD
1NDEPENDENCE, MO 64050
DUER, MILDRED C PD
324 E 69TH TERR
KANSAS CITY, MO 64113
DUERKSEN, JOSEPH J AN
4407 W 54TH TERR
SHAWNEE MISSION, KS 66205
DUKSTEIN, WALTER G NM
6400 PROSPECT
KANSAS CITY, MO 64132
DUNCAN, WM H GS
911 MA1N ST
KANSAS CITY, MO 64105
DUNLEAVY, JAMES D GP
4620 JC NICHOLS PKWY ST
KANSAS CITY, MO 64112
DURIE, ROBT H PUD
2929 8ALTIMDRE
KANSAS C1TY, MO 64108
DURNELL, MONAFORD D GP
GOPPERT FAM1LY CARE CTR
6601 ROCKH1LL RD
KANSAS CITY, MO 64131
DWYER, FRANK X D
4620 J. C NICHOLS PKWY
KANSAS CITY, MO 64112
DWYER, HUGH L PD
10016 MASTIN DR
SHAWNEE MISSION, KS 66212
EARNEST, JAMES B CD
2929 BALTIMORE STE 415
KANSAS CITY, MO 64108
EISEMANN, GUSTAVE 1M
STATLAND CL1NIC
6724 TROOST SUITE 71
KANSAS CITY, MO 64131
ELIAS, DAVID J GP
9306 E NEW 40 H1GHWAY
INDEPENDENCE, MO 64055
ELLENBOGEN, CHARLES ID
UMKC SCHOOL OF MED1CINE
2411 HOLMES
KANSAS CITY, MO 64108
ELLFELDT, HOWARD J DRS
6400 PROSPECT AVE
KANSAS CITY, MO 64132
ELLIOTT, RAYMDND G GP
301 PROFESSIONAL ARTS B
91ST PLACE & STATE L
KANSAS CITY, MO 64114
ELLIOTT, WADE E GP
710 W 12TH ST
KANSAS C1TY, MO 64105
ELLIS, DAVID L GS
6724 TROOST
KANSAS CITY, MO 64131
ELSER, OTTO H OPH
1515 W TRUMAN STE 303
INDEPENDENCE, MO 64050
ENGEL, LAWRENCE P GS
6505 W 103RD
SHAWNEE MISSION, KS 66212
ENGELMANN, CALVIN E GS
2929 BALTIMORE AVE
KANSAS CITY, MO 64108
ENGLEMAN, RE1NHOLD TS
1002 WALNUT
KANSAS CITY, MO 64106
ERICSSON, SAML E D
6724 TROOST H205
KANSAS CITY, MO 64131
ERV1N, JOHN E IM
415 PENN PARK
2929 BALTIMORE
KANSAS CITY, MO 64108
ESHELMAN, ALBERT D GP
9103 EAST 40 HIGHWAY
INDEPENDENCE, MO 64055
EUBANK, DAV1D F PD
9406 E 63RD ST
RAYTOWN, MO 64133
EUBANK, D1LLARD M GP
6020 ELM AVE
KANSAS CITY, MO 64133
EUBANK, WM Y 1M
6400 PROSPECT AVE SUITE
KANSAS CITY, MO 64132
EUPRASERT, PR1CHA GS
6331 DEARBORN DR
SHAWNEE MISSION, KS 66202

VANS, JOS C 1515 W TRUMAN RD INDEPENDENCE, MO 64050	GS
VANS, LAWRENCE L 4320 WORNALL KANSAS CITY, MO 64111	GS
VERETT, JAMES E 4 WEST DARTMOUTH RD KANSAS CITY, MO 64113	OBG
AIRCHILD, ROBT C 8425 RHEINHARDT LANE SHAWNEE MISSION, KS 66206	PD
ARAON, JOSE B 2525 EUCLID AVE KANSAS CITY, MO 64127	PTH
ARNHAM, MILO M 1515 W TRUMAN RD INDEPENDENCE, MO 64050	IM
AYEZ, JAMIL A TRUMAN MEDICAL CTR 2301 HOLMES KANSAS CITY, MO 64108	IM
AYNE, FRED A 14 DOCTORS BLDG E 751 E 63RD ST KANSAS CITY, MO 64110	P
EDOTIN, MICHAEL S 3019 W 84TH ST LEAWOOD, KS 66206	GE
EE, CHESTER F 2929 BALTIMORE AVE KANSAS CITY, MO 64108	ORS
EIST, GEO V 1103 W 86TH TERR KANSAS CITY, MO 64114	GP
EIST, WM E 10618 W 98TH TERRACE OVERLAND PARK, KS 66214	IM
ERGUSON, DONALD S 2012 E 24TH ST KANSAS CITY, MO 64127	GP
ERRIS, CARYL R 6400 PROSPECT KANSAS CITY, MO 64132	IM
IBUCH, EUGENE E ST LUKES HOSP 44TH AND WORNAL RD KANSAS CITY, MO 64111	AN
ILIP, ALEXANDER J 2928 MAIN ST. #335 KANSAS CITY, MO 64108	U
INKLE, ROBERT H 10901 WINNER RD INDEPENDENCE, MO 64052	ORS
ISHER, JAMES K 710 MEDICAL PLAZA 4320 WORNALL RD. KANSAS CITY, MO 64111	DR
ITZ SIMMONS, JAMES G 4320 WORNALL ROAD 710 MEDICAL PLAZA KANSAS CITY, MO 64111	DR
ITZGERALD, ROBERT H 5219 WEST 96TH STREET OVERLAND PARK, KS 66207	ORS
LATLEY, JOHN A 6700 TROOST ST KANSAS CITY, MO 64131	GS
LEMING, ALLAN R 415 PENN PARK BLDG 2929 BALTIMORE KANSAS CITY, MO 64108	IM
LETCHER, ROBERT C 1010 CARONDELET DR SUITE 112 KANSAS CITY, MO 64114	OPH
LYNN, JAMES M MEYER & PROSPECT RESEARCH HOSP KANSAS CITY, MO 64132	PTH
OLCK, WM P 911 MAIN STREET KANSAS CITY, MO 64105	OM
ORGUE, DONALD R CHILDRENS MERCY HOSP 24TH & GILLHAM RD KANSAS CITY, MO 64108	PD
ORMAN, LOUIS H 4320 WORNALL RD KANSAS CITY, MO 64111	P
ORSYTHE, LEES C 4320 WORNALL RD KANSAS CITY, MO 64111	IM
ORSYTHE, ROBT W 4320 WORNALL RD KANSAS CITY, MO 64111	NS
ORTIN, FELIX D 4320 WORNALL ROAD KANSAS CITY, MO 64111	DR
OUTS, DALLAS B 1515 W TRUMAN RD STE 30 INDEPENDENCE, MO 64050	IM
OWLER, FRED D 4320 WORNALL RD KANSAS CITY, MO 64111	NS
FOWLER, JAMES W 502 ROCKHILL MED BLDG 6700 TROOST KANSAS CITY, MO 64131	IM
FRANCISCO, CLARENCE B CHILDRENS MERCY HOSP DE KANSAS CITY, MO 64108	N
FRANCO, PILAR J 340 ST JOSEPH MEDICAL B 1010 CARONDELET DRIV KANSAS CITY, MO 64114	P
FRANK, GAEL R 4240 BLUE RIDGE BLVD KANSAS CITY, MO 64133	ORS
FRANKLIN, CURTIS U 4301 MAIN STE 41 KANSAS CITY, MO 64111	P
FREEMAN, JERRY C 3725 BROADWAY KANSAS CITY, MO 64111	OTO
FREIDEN, FLOYD J 436 ROCKHILL MEDICAL BL 6700 TROOST KANSAS CITY, MO 64131	U
FRIEDMAN, MORRIS L 601 E 6ORD ST KANSAS CITY, MO 64110	IM
FRITZLEN, THOS J 101 MEMORIAL DR KANSAS CITY, MO 64108	PTH
FUHRMAN, DONALD L 4320 WORNALL KANSAS CITY, MO 64111	D
FURLONG, LAWRENCE D 1010 CARONDELET DR. KANSAS CITY,, MO 66114	DR
GADOR, FRANCISCO A C/O ST JOSEPH HOSP EMER 1000 CARONDELET DR KANSAS CITY, MO 64114	EM
GAINEY, HAROLD L 8127 PENNSYLVANIA LA KANSAS CITY, MO 64114	OBG
GAITONDE, MANGESH R 202 BROADWAY MED. BLDG. 4400 BROADWAY KANSAS CITY, MO 64111	P
GALBREATH, ASHFORD M 4620 JC NICHOLS PKWY-NO KANSAS CITY, MO 64112	IM
GARD, RAYMOND F 593 TERRACE DR PRATT, KS 67124	GS
GARNER, JAMES H 1010 CARONDELET DR. #426 KANSAS CITY, MO 64114	ORS
GARRISON, ROY F 6400 PROSPECT AVE KANSAS CITY, MO 64132	PD
GASKINS, JOHN H F-10 LAKE LOTAWANA LEE'S SUMMIT, MO 64063	PS
GAUTHIER, CHARLES P 2316 E MEYER BLVD KANSAS CITY, MO 64132	PTH
GEHA, BRAHAM J 310 CARONDELET MED BLDG 1010 CARONDELET DR KANSAS CITY, MO 64114	IM
GEIGER, WM A 6400 PROSPECT AVE STE 1 KANSAS CITY, MO 64132	AN
GEMPEL, PAUL A 1221 BRASIE FLOSSMOOR, IL 60422	OBG
GENTRY, ENOCH N 810 W 69TH ST KANSAS CITY, MO 64113	GS
GERMANN, DONALD R 710 MEDICAL PLAZA 4320 WORNALL RD KANSAS CITY, MO 64111	DR
GHOLKAR, VIJAY R ST LUKE HOSP KANSAS CITY, MO 64111	AN
GIBBONS, ROBT T JR. 8422 REINHARDT LA. SHAWNEE MISSION, KS 66206	AN
GIBSON, DAVID M ST LUKES HOSP KANSAS CITY, MO 64111	PTH
*GILGORE, ALFRED 9421 PFLUMM RD LENEXA, KS 66215	GP
GINARDI, DONALD E 4643 WYANDOTTE KANSAS CITY, MO 64112	GE
GINSBERG, NORMAN A 2929 BALTIMORE STE 320 KANSAS CITY, MO 64108	PS
GIST, WM W 9406 E 63RD ST KANSAS CITY, MO 64133	GS
GIVLER, ROBT L RESEARCH MEDICAL CENTER KANSAS CITY, MO 64132	PTH
GLASER, LARRY F 6724 TROOST STE 300 KANSAS CITY, MO 64131	ORS
GLASSCOCK, ERNEST L 6214 HIGH DR PRAIRIE VILLAGE, KS 66208	PD
GLATTER, THOMAS R UMKC SCHOOL OF MED 2411 HOLMES KANSAS CITY, MO 64108	IM
GLAZER, MELVIN L 8300 TROOST KANSAS CITY, MO 64131	IM
GOERZ, ANN A 1612 W TRUMAN INDEPENDENCE, MO 64050	PD
GOERZ, ROYAL D 1515 W TRUMAN ROAD INDEPENDENCE, MO 64050	OBG
GOETZ, KENNETH L WORNALL ROAD AT 44TH ST KANSAS CITY, MO 64111	OS
GOHEEN, JOHN R 310 CARONDELET MED. BLDG. 1010 CARONDELET DR KANSAS CITY, MO 64114	PUD
GOLDMAN, STANLEY L SUITE 503 601 E 63RD ST KANSAS CITY, MO 64110	A
GOLDSICH, EDWARD 4400 BROADWAY KANSAS CITY, MO 64111	OBG
GOLDSTEIN, MARVIN F 6724 TROOST 504 BRYAN BLDG KANSAS CITY, MO 64131	OPH
GOODSON, WM H 815 W 59TH ST KANSAS CITY, MO 64113	IM
GOOLSBEE, ROBT L 6438 SAGAMORE SHAWNEE MISSION, KS 66208	AN
GOTTSCH, JOSEPH C 2929 BALTIMORE AVE KANSAS CITY, MO 64108	ORS
GOWDAMARAJAN, RENGASAMY 24TH & GILLHAM KANSAS CITY, MO 64108	PDC
GRAHAM, PATRICK G 4320 WORNALL RD KANSAS CITY, MO 64111	GS
GRAHAM, WALLACE H 304 HIGHLANDS PROF TOWE 6724 TROOST KANSAS CITY, MO 64131	GS
GREEN, J R 17221 E 23RD ST INDEPENDENCE, MO 64057	GS
GREEN, THOMAS F 2116 SOUTH STERLING INDEPENDENCE, MO 64052	OBG
GREENBERG, MARTIN T 373 W 101ST TERR KANSAS CITY, MO 64114	IM
GREENE, W W 2008 W 68 ST SHAWNEE MISSION, KS 66208	GS
GRIFFIN, DONALD R 8728 CATALINA DR PRAIRIE VILLAGE, KS 66208	AN
GRIFFITH, JOHN A 332 MEDICAL PLAZA 4320 WORNALL RD KANSAS CITY, MO 64111	GS
GRIMES, ELWYN M TRUMAN MEDICAL CENTER 2301 HOLMES KANSAS CITY, MO 64108	OBG
GROWDON, JOHN A 6508 ABERDEEN RD SHAWNEE MISSION, KS 66208	GS
GRUNDEN, VIDALITA G 6505 GOODMAN SHAWNEE MISSION, KS 66202	OS
GRUNT, JEROME A CHILDRENS MERCY HOSP DE KANSAS CITY, MO 64108	IM
GUASTELLO, JOS R 512 MEDICAL PLAZA 4320 WORNALL RD KANSAS CITY, MO 64111	OTO
GUASTELLO, MARIO J 4320 WORNALL RD KANSAS CITY, MO 64111	OTO
GUERRA, GASTON G 330 PENN PARK 2929 BALTIMORE KANSAS CITY, MO 64108	GS
GULLETT, CHAS C P O BOX 20007 KANSAS CITY, MO 64195	AM
GUNDLE, SIGMUND 601 EAST 63RD STREET KANSAS CITY, MO 64110	P
GUNN, RICHARD W 1500 PROF BLDG 1103 GRAND AVE KANSAS CITY, MO 64106	IM
GUPTA, B S WESTERN MO MENTAL HEALT 600 EAST 22ND ST KANSAS CITY, MO 64108	P

Doctor of Osteopathy

GUSTAFSON, JON E R
1509 TRUMAN RD
INDEPENDENCE, MO 64050

GUTEK, EDWARD P PS
408 BROADWAY MED BLDG
4400 BROADWAY
KANSAS CITY, MD 64111

GUTKNECHT, RICHARD OBG
2116 SO STERLING
INDEPENDENCE, MO 64052

HAAS, HARRY D IM
624 MEDICAL PLAZA
4320 WDRNALL RD
KANSAS CITY, MO 64111

HABI8, HENRY N U
232 RESEARCH MED OFF BL
6400 PRDSPECT
KANSAS CITY, MO 64132

HAGAR, DAVID L PO
9406 E 63RO ST
KANSAS CITY, MO 64133

HAHN, BRUCE H GS
615 W 3RD ST
LEE'S SUMMIT, MO 64063

HAHN, FREOERICK W OTO
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133

HAIGHT, JOHN M GP
3401 E 12TH ST
KANSAS CITY, MO 64127

HAITH, EOWARD E GS
6724 TROOST
KANSAS CITY, MO 64131

HAITH, WALTER F O8G
2701 E 31ST ST
KANSAS CITY, MO 64128

HALL, JOHN C O
4400 BROADWAY STE 505
KANSAS CITY, MO 64111

HALL, RALPH R IM
WORNALL RO AT 44TH
KANSAS CITY, MO 64111

HALL, ROBT T PD
24TH GILLHAM ROAO
KANSAS CITY, MO 64108

HALL, THOS B O
612 SHAMROCK LANE
APT 310
LEE'S SUMMIT, MO 64063

HALPERIN, PHILLIP H GS
6724 TROOST
SUITE 910
KANSAS CITY, MO 64131

HAMILL, ROBT W N
236 MEOICAL PLAZA
4320 WORNALL RO
KANSAS CITY, MO 64111

HAMLIN, HOWARO H GS
4301 MAIN ST
KANSAS CITY, MO 64111

HANNAH, HAMNER GS
MENORAH MEOICAL CENTER
4949 ROCKHILL RO
KANSAS CITY, MO 64110

HANNAS, RALSTON R OS
11812 AVILA OR
KANSAS CITY, MO 64114

HANSON, E J NS
4320 WORNALL RD STE 328
KANSAS CITY, MO 64111

HANSON, KARL H IM
4320 WORNELL STE 212
KANSAS CITY, MO 64111

HAROACRE, RUTH A OS
3300 CHARLOTTE ST
KANSAS CITY, MO 64109

HARDY, HENRY M AN
6606 OVERHILL RD
SHAWNEE MISSION, KS 66208

HARDY, JOHN W IM
AMER TELEPHONE & TELEGRAPH
811 MAIN 8OX 1418
KANSAS CITY, MO 64141

HARLESS, MORRIS S GS
RT 2 BOX 8B
GALENA, MO 65656

HARLOW, LLOYO M GS
2462 A BROOKLYN ST
KANSAS CITY, MO 64127

HARRIN, WM R U
300 MEDICAL PLAZA
4320 WORNALL RD
KANSAS CITY, MO 64111

HARRIS, DAVIO J PO
CHILORENS MERCY HOSP
24TH AT GILLNAM RD
KANSAS CITY, MO 64108

HARRIS, LANNY W ORS
6400 PROSPECT
KANSAS CITY, MO 64132

HARRIS, WELOON L PD
17221 E 23RO ST
INDEPENDENCE, MO 64057

HART, L W
4400 BROADWAY STE 202
KANSAS CITY, MO 64111

HARTMAN, GREGORY L IM
224 MEDICAL PLAZA
4320 WORNAL RD
KANSAS CITY, MO 64111

HARTWIG, FREDERICK H GS
6400 PROSPECT AVE
KANSAS CITY, MO 64132

HARTWIG, RAYMONO W R
6546 WENONGA RD
SHAWNEE MISSIDN, KS 66208

HAUSHEER, HERMAN J OBG
1515 W TRUMAN RD STE 30
INDEPENDENCE, MO 64050

HAYS, LARRY V GS
4320 WORNALL
KANSAS CITY, MO 64111

HAZEN, ROBT M OTO
6400 PROSPECT AVE
KANSAS CITY, MD 64132

HAZUKA, DAVID F DR
9124 CATALINA
SHAWNEE MISSIDN, KS 66206

HEILMAN, EDWARO J IM
6700 TROOST RM 604
KANSAS CITY, MO 64131

HELLERSTEIN, STANLEY PD
CHILORENS MERCY HOSP
KANSAS CITY, MO 64108

HELLING, THOMAS S GS
722 MEDICAL PLAZA
4320 WORNALL RO
KANSAS CITY, MO 64111

HELLMAN, RICHARO IM
2411 HOLMES
KANSAS CITY, MO 64108

HELMAN, RICHARO G OBG
4140 8ONWAY OR
PENSACOLA, FL 32504

HEMAYA, RIZK M P
600 E 22NO ST
KANSAS CITY, MO 64108

HENRY, CLARKE L GS
4320 WORNALL RO
KANSAS CITY, MO 64111

HERDOIZA, ALFONSO W AN
751 E 63RO ST
KANSAS CITY, MO 64110

HERMAN, EDWIN M R
900 HIGHLANO PROF TOWER
6724 TROOST
KANSAS CITY, MO 64131

HERVEY, WM H AN
WORNALL RD AT 44TH
KANSAS CITY, MO 64111

HERYER, JOHN W CRS
4424 W 74TH TERR
SHAWNEE MISSION, KS 66208

HIBBARD, BLAINE Z IM
4320 WORNALL RO
KANSAS CITY, MO 64111

HICKERSON, WM H GP
604 W MAPLE
INDEPENOENCE, MO 64050

HIGGINS, RONALD A O
340 CARONOELET MEO OFF
1010 CARONDELET DR
KANSAS CITY, MO 64114

HILL, JACK H PTH
31ST ANO WYANDOTTE STS
KANSAS CITY, MO 64108

HINK, FREOERICK W GP
10229 INOEPENOENCE AVE
INDEPENDENCE, MO 64D53

HIRSCH, JOE E CRS
510 PLAZA PARKWAY BLOG
4620 JC NICHOLS PKWY
KANSAS CITY, MO 64112

HOAOLEY, WM O IM
6400 PROSPECT
KANSAS CITY, MO 64132

HOOGSON, FRANK H GS
4301 MAIN ST
KANSAS CITY, MO 64111

HOECH, GEO P AN
6400 PROSPECT
KANSAS CITY, MO 64132

HOEPER, SAML O GP
12921 GRANOVIEW RD
GRANOVIEW, MO 64030

HOEPER, SAMUEL O JR. IM
12921 GRANVIEW RD
GRANDVIEW, MO 64030

HOFFMAN, JACOB S IM
751 E 630 ST
KANSAS CITY, MO 64110

HOFFMANN, ALAN L GP
6300 EVANSTON
KANSAS CITY, MO 64133

HOFFMANN, LEE M N
5017 MISSION RD
SHAWNEE MISSION, KS 66205

HOLOER, THOS M GS
509 8ROAOWAY MED BLOG
4400 BROAOWAY
KANSAS CITY, MO 64111

HOLLINGER, LLOYO A PUD
6700 TROOST
KANSAS CITY, MO 64131

HOLLWEG, KENNETH C R
4320 WORNALL RO
KANSAS CITY, MO 64111

HOLMAN, JOS G A
4620 J C NICHOLS PKWY
KANSAS CITY, MO 64112

HDLT, WALDO S I
4620 J C NICHOLS PKWY
KANSAS CITY, MO 64112

HOLTON, EDWARD B G
10901 WINNER RD
INDEPENDENCE, MD 64052

HDOK, WALLER G C
10010 EL MDNTE
SHAWNEE MISSION, KS 66207

HOPKINS, JAMES P P
6700 TROOST AVE
KANSAS CITY, MO 64131

HORNSTRA, RDBIJN K P
6724 TRDDST
KANSAS CITY, MD 64131

HUANG, CHING B A
2121 WEST MAIN RD
#409
PORTSMOUTH, RI 02871

HUGHES, MICHAEL F O
1010 CARONDELET OR.
SUITE 224
KANSAS CITY, MO 64114

HUGHES, ROBERT E P
4400 8ROAOWAY
KANSAS CITY, MO 64111

HUNGATE, CARROLL P O
522 PROFESSIONAL BLOG
1103 GRAND AVE
KANSAS CITY, MO 64106

HUNKELER, JOHN D O
230 PENN PARK BLOG
2928 MAIN
KANSAS CITY, MO 64108

HUNT, THOS R NS
6400 PROSPECT AVE
KANSAS CITY, MO 64132

HUNZICKER, WARREN J I
P O BOX 139
KANSAS CITY, MO 64141

HUSE, WM J D
2929 BALTIMORE
KANSAS CITY, MO 64108

HUSEMAN, RICHARO N
240 PROFESSIONAL BLDG N
2700 HOSPITAL OR
KANSAS CITY, MO 64116

HUSTON, KENT A IM
4320 WORNALL RO
MEO PLAZA BLD ST 212
KANSAS CITY, MO 64111

HUTSON, BRUCE P OS
508 MEDICAL PLAZA
4320 WORNALL RO
KANSAS CITY, MO 64111

HYDE, LAWRENCE L DP
230 PENN PARK MEO 8LOG
2928 MAIN ST
KANSAS CITY, MO 64108

IBARRA, GUILLERMO P
4400 BROADWAY
KANSAS CITY, MO 64111

INGHAM, WALTON C GS
4320 WORNALL RD
KANSAS CITY, MO 64111

IRVINE, JOHN W OP
8800 E 6ORO ST
RAYTOWN, MO 64133

IRWIG, FRED IM
4706 BROADWAY
KANSAS CITY, MO 64112

JACKSON, HAYWOOO R IM
3317 E 43RO ST
KANSAS CITY, MO 64130

JACOBS, MORTON P
P. O. BOX 22306
KANSAS CITY, MO 64113

JACOBS, WALTER H GE
6656 MILHAVEN ORIVE
MISSION, KS 66202

JAMES, OTIS E OR
6306 MORNINGSIOE DR
KANSAS CITY, MO 64113

JAZBI, BASHARAT U OT
CHILDRENS MERCY HOSP
24TH & GILLHAM
KANSAS CITY, MO 64108

JELLEY, V C OM
1600 W 40 HIGHWAY
SUITE 102
BLUE SPRINGS, MO 64015

JENAB, MORTEZA CD
6601 ROCKHILL RD
BAPTIST MEMORIAL HOS
KANSAS CITY, MO 64131

JENKINS, OAVIO C CL
COMMUNITY BLOOD CTR
4040 MAIN
KANSAS CITY, MO 64111

JENNETT, J H IM
1500 PROF BLDG 1103 GRA
KANSAS CITY, MO 64106

JOHNSON, C L U
2929 BALTIMORE
KANSAS CITY, MO 64108

JOHNSON, DALLAS A D
6700 TROOST STE 304
KANSAS CITY, MO 64131

JDHNSON, EDGAR W 1917 O BRIEN LEE'S SUMMIT, MO 64063	IM
JDHNSON, GARETH R 23RD & R D MIZE RD INDEPENDENCE, MO 64057	PTH
JDHNSDN, JAMES S 4301 CLEVELAND KANSAS CITY, MO 64130	OBG
JDHNSON, JOS E 707 W MONTCREW KANSAS CITY, MO 64114	GP
JOHNSON, NELSON E 4301 CLEVELAND KANSAS CITY, MO 64130	OBG
JDHNSON, RICHARD L 6400 PROSPECT STE 333 KANSAS CITY, MO 64132	IM
JOHNSON, THOMAS W 201 E ARMOUR BLVD KANSAS CITY, MO 64111	US
JOHNSON, THOS M 8127 EL MONTE SHAWNEE MISSION, KS 66208	GS
JOHNSON, WARREN L 410 MEDICAL PLAZA 4320 WORNALL RD KANSAS CITY, MO 64111	CD
JDNAS, HARRY S DEAN UMKC SCHOOL OF MED 2411 HOLMES KANSAS CITY, MO 64108	OBG
JDNES, GALE O 6400 PROSPECT STE 142 KANSAS CITY, MO 64132	AN
JDNES, MARION E 2462A BROOKLYN AVE KANSAS CITY, MO 64127	U
JONES, SAML T 9915 CHEROKEE LN SHAWNEE MISSION, KS 66206	OPH
JDNES, T R 4320 WORNALL RD SUITE 6 KANSAS CITY, MO 64111	IM
JOYCE, STEVEN T 610 MEDICAL PLAZA 4320 WORNALL RD. KANSAS CITY, MO 64111	ORS
JUSTUS, JOHN B 4620 J C NICHOLS PKWY KANSAS CITY, MO 64112	IM
KAHN, MARVIN STATLAND CLINIC 6724 TROOST-STE 710 KANSAS CITY, MO 64131	IM
KANAREK, JOSEPH 601 E 63RD ST KANSAS CITY, MO 64110	PD
KANDT, RAYMONO E 416 CARONDELET MEDICAL 1010 CARONDELET DR KANSAS CITY, MO 64114	OPH
KANTOR, JULIUS M 601 E 63RD ST KANSAS CITY, MO 64110	PD
KANTOR, SAML 6700 TROOST KANSAS CITY, MO 64131	OPH
KARTUS, IRVING 9120 WARD PARKWAY TERR KANSAS CITY, MO 64114	P
KAUFMAN, ANDREW B 400 ROCKHILL MED. BLD. 6700 TROOST KANSAS CITY, MO 64131	NS
KAUFMANN, HERBERT H 6724 TROOST STE 210 KANSAS CITY, MO 64131	OBG
KAUL, PHILIP G 4320 WORNALL RD KANSAS CITY, MO 64111	IM
KAY, BILLY F 807 CLAIRBORNE DLATHE, KS 66061	IM
KAYANAN, JOSE C 2929 BALTIMORE KANSAS CITY, MO 64108	GS
KEAIRNES, HAROLD W UMKS MEDSCH-2411 HOLMES KANSAS CITY, MO 64108	IM
KEELER, JAMES E 4400 BROADWAY-SUITE 302 KANSAS CITY, MO 64111	OBG
KEITGES, PIERRE W PHYSICIANS REF. LAB. 1010 W. CARONDELET DR KANSAS CITY, MO 64114	PTH
KELLING, DOUGLAS G 11021 WEST 96TH TERRACE OVERLANO PARK, KS 66214	OM
KELLY, CHARLES R ST. LUKE'S HOSP 44TH AND WORNALL RD. KANSAS CITY, MO 64111	PM
KELTNER, RAYMOND O 4400 BROADWAY-SUITE 302 KANSAS CITY, MO 64111	OBG
KENDALL, CHAS A 4240 BLUE RIDGE BLVD KANSAS CITY, MO 64133	IM
KENDALL, FORREST H SUITE 224 1010 CARONDELET DR KANSAS CITY, MO 64114	OTO
KENDALL, MALCOLM E 6724 TROOST KANSAS CITY, MO 64131	CD
KENNARD, G K 44DO BROADWAY KANSAS CITY, MO 64111	GS
KENNEDY, EILEEN O CHILDRENS MERCY HOSP 24TH & GILLHAM RD KANSAS CITY, MO 64108	PD
KENNEDY, FRED R 4320 WORNALL RD KANSAS CITY, MO 64111	GS
KENNEDY, TIMOTHY D 2929 BALTIMORE ST E340 KANSAS CITY, MO 64108	R
KENNEY, JOHN D SUITE 12 751 E 63RD ST KANSAS CITY, MO 64110	AN
KENT, BELA K 6724 TROOST AVE KANSAS CITY, MO 64131	OBG
KEPES, MAGDA DEPT OF PATHOLOGY LAKESIDE HOSP KANSAS CITY, MO 64131	PTH
KERNODLE, JEFFERSON O P O BOX 2778 KANSAS CITY, MO 64142	PTH
KERR, HAROLD H 8121 NW MIAMI ST KANSAS CITY, MO 64152	TS
KETTERMAN, GRACE H CRITTENTON CENTER 10918 ELM AVE. KANSAS CITY, MO 64134	OS
KETTERMAN, HERBERT L 11201 COLORADO KANSAS CITY, MO 64137	GP
KETTNER, EDWARD G 1200 BRYANT BLDG 1102 GRAND AVE KANSAS CITY, MO 64106	IM
KHARE, NARENDRA K TRUMAN MED. CTR. 2301 HOLMES KANSAS CITY, MO 64108	U
KHOURY, CECILE S 10204 HOWE LANE LEAWOOD, KS 66206	AN
KIENE, RICHARD H 4320 WORNALL RD KANSAS CITY, MO 64111	ORS
KILLEN, DUNCAN A 510 MEO PLAZA BLDG 4320 WORNALL RD KANSAS CITY, MO 64111	TS
KIMBALL, MERRITT H 610 E 36TH KANSAS CITY, MO 64109	AN
KIMBLE, HARVEY S BOX 773 SHAWNEE MISSION, KS 66201	AN
KINDRED, LYNN H 4320 WORNALL KANSAS CITY, MO 64111	CD
KING, JAY T 4320 WORNALL RD. KANSAS CITY, MO 64111	CD
KINGSBURY, HELEN 6415 SAGAMORE RD SHAWNEE MISSION, KS 66208	AN
KIRCHMER, JOHN T 6724 TROOST AVE KANSAS CITY, MO 64131	GS
KITCHEN, WM M 2929 BALTIMORE AVE KANSAS CITY, MO 64108	R
KLEIN, EDWARD H 7011 RAE AVE PRAIRIE VILLAGE, KS 66208	GS
KNIGHT, LYLE B 108 MADISON LEE'S SUMMIT, MO 64063	GP
KNOCH, H K 328 ST JOSEPH MED BLDG 1010 CARONDELET OR KANSAS CITY, MO 64114	OBG
KOON, BENNY H GOPPERT FAMILY CARE CTR 6601 ROCKHILL RD KANSAS CITY, MO 64131	GP
KOONTZ, PAUL G 4320 WORNALL RD KANSAS CITY, MO 64111	GS
KOPPERMAN, MORDECAI 900 HIGHLAND PROFESSION 6724 TROOST KANSAS CITY, MO 64131	DR
KOPPERS, LAWRENCE E 6400 PROSPECT AVE STE 3 KANSAS CITY, MO 64132	IM
KORTH, WM M 6300 MIDNIGHT PASS RD V SARASOTA, FL 33581	GS
KOSURI, LALITHA TRUMAN MED CTR 2301 HOLMES KANSAS CITY, MO 64108	IM
KOURY, WILLIAM C 4320 WORNALL RD STE 710 KANSAS CITY, MO 64111	DR
KRAFT, JACOB 6700 TROSST KANSAS CITY, MO 64131	GS
KRANSON, SEYMOUR J 909 W JOHSTON AVE HEMET, CA 92343	PD
KUHN, WM F 6247 BROOKSIDE BLVD KANSAS CITY, MO 64113	OS
KUNZ, STEPHEN R 10348 CHEROKEE LEAWOOD, KS 66206	R
KURTZ, KARL J 4400 BROADWAY SUITE 412 KANSAS CITY, MO 64111	U
KYGER, JOHN E 3612 BLUE RIDGE BLVD INDEPENDENCE, MO 64052	AN
LALLY, JAMES J 4620 NICHOLS PKWY KANSAS CITY, MO 64112	GS
LAMAR, ROBT F 5140 ANTIOCH RD NE KANSAS CITY, MO 64119	OBG
LAMBERT, LAURA M 1039 PARKWOOD DR ORMOND BEACH, FL 32074	GP
LAMBIE, RODGER W 900 HIGHLAND PROF TOWER 6724 TROOST KANSAS CITY, MO 64131	R
LAMBRIGHT, ROBERT L 6120 MORNINGSIDE DR. KANSAS CITY, MO 64113	P
LANDERS, BURNELL 6400 PROSPECT SUITE 300 KANSAS CITY, MO 64132	GE
LANDIS, GEO K 1102 GRAND AVE KANSAS CITY, MO 64106	IM
LAPI, ANGELO 2012 STRATFORD RD SHAWNEE MISSION, KS 66208	PTH
LAPP, HARRY C 612 SHAMROCK 211 VILLA I LEE'S SUMMIT, MO 64063	GS
LARSEN, WM E 2929 BALTIMORE KANSAS CITY, MO 64108	IM
LATHAM, RAYMOND W 4400 BROADWAY KANSAS CITY, MO 64111	PD
LAUER, DANL J 236 MEDICAL PLAZA 4320 WORNALL RD KANSAS CITY, MO 64111	IM
LAYLE, JOHN K 4320 WORNALL KANSAS CITY, MO 64111	IM
LAYTON, IRA C 6400 PROSPECT AVE STE 3 KANSAS CITY, MO 64132	IM
LEE, GERALD B 101 MERMORIAL DR KANSAS CITY, MO 64108	CD
LEE, HENRY A 6700 TROOST 352 ROCKHILL MED BLD KANSAS CITY, MO 64131	R
LEE, KING Y 6700 TROOST AVE KANSAS CITY, MO 64131	OPH
LEE, LAWRENCE E 10102 GILLETTE LENEXA, KS 66215	TR
LEE, TAE H 6400 PROSPECT KANSAS CITY, MO 64132	NEP
LEES, JOYCE M TRINITY LUTHERAN HOSP 31ST & WYANDOTTE ST KANSAS CITY, MO 64108	GS
LEHNER, RICHARD L MEDICAL PLAZA BLDG SUIT 4320 WORNALL RD KANSAS CITY, MO 64111	CD
LEIBSOHN, JOEL M 1515 W TRUMAN RD INDEPENDENCE, MO 64050	OPH
LEIFER, WM W 703 HIGHLANDS PROF TOWE 6724 TROOST KANSAS CITY, MO 64131	U
LENTZ, CLARK H P O BOX 458 31ST & SOUTHWEST TWY KANSAS CITY, MO 64141	OM
LENTZ, HAROLD C 55TH TERR AND NOLAND RD KANSAS CITY, MO 64133	U

LERNER, BRUCE AN
10621 W. 102ND ST.
SHAWNEE MISSION, KS 66214
LESTER, JOHN B P
4706 BROADWAY
KANSAS CITY, MO 64112
LEVEY, HARRY B OBG
310 HIGHLANDS PROFESSIO
6724 TROOST
KANSAS CITY, MO 64131
LEWIS, REVIS C NS
PENN PARK MED BLDG STE
2929 BALTIMORE
KANSAS CITY, MO 64108
LEWITTON, SOLOMON GS
410 HIGHLAND PROF TOWER
6724 TROOST
KANSAS CITY, MO 64131
LIANG, JING C GS
17221 E 23RD
INDEPENDENCE, MO 64057
LICHTOR, JOS M ORS
6724 TROOST SUITE 409
KANSAS CITY, MO 64131
LIE, SIEN H OBG
1020 E 75TH WAY
KANSAS CITY, MO 64131
LINDGREN, CARLETON J P
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
LINDQUIST, CARL N OM
RT 4 BOX 150
REEDS SPRING, MO 65737
LINK, VANCE E GP
1515 W TRUMAN RD STE 30
INDEPENDENCE, MO 64050
LINVILLE, HOWARD E GS
6700 TROOST AV STE 444
KANSAS CITY, MO 64131
LITTON, NANCY J PTH
SUITE 206
1600 WEST HIGHWAY 40
BLUE SPRINGS, MO 64015
LIU, BEN C OBG
310 HIGHLANDS PROFESSIO
6724 TROOST
KANSAS CITY, MO 64131
LOCKWOOD, GARY F OBG
4320 WORNALL RD STE 520
KANSAS CITY, MO 64111
LOHRENTZ, LOIS H AN
2800 W 50TH TERRACE
SHAWNEE MISSION, KS 66205
LONG, R S GP
6601 ROCKHILL ROAD
KANSAS CITY, MO 64131
LOPEZ-PLATA, ROBERTO GS
701 E 63RD STREET
KANSAS CITY, MO 64110
LORD, JAMES L GP
1515 W TRUMAN ROAD
SUITE 504
INDEPENDENCE, MO 64050
LORENZO, EDILBERTO B CHP
1820 W 91ST PLACE
KANSAS CITY, MO 64114
LORENZO-MEDINA, REMEDIOS IM
509 W 119TH TERR
KANSAS CITY, MO 64145
LOTUACO, GAMALIEL G PS
4400 BROADWAY
KANSAS CITY, MO 64111
LOUTZENHISER, JAMES K P
6400 PROSPECT
KANSAS CITY, MO 64132
LUETJE, CHARLES M OTO
105 PENN PARK
2928 MAIN
KANSAS CITY, MO 64108
LYDDON, HAROLD R GP
75TH & TROOST STS
KANSAS CITY, MO 64131
MABEN, SAM E IM
9406 E 63RD
KANSAS CITY, MO 64133
MAC GEE, EDWIN E NS
4440 BROADWAY
KANSAS CITY, MO 64111
MAC INNIS, FLORENCE E PUD
4620 J C NICHOLS PKWY
KANSAS CITY, MO 64112
MAC NAUGHTON, RALPH E DR
CARONDELET RADIOLOGY IN
1010 CARONDELET DR R
KANSAS CITY, MO 64114
MAC NAUGHTON, ROBT A R
CARONDELET RADIOLOGY IN
1010 CARONDELET DR R
KANSAS CITY, MO 64114
MACDONALD, ROBIN R DR
352 ROCKHILL MED. BLDG.
6700 TROOST
KANSAS CITY, MO 64131
MAIS, THOMAS E R
ST. LUKE'S HOSPITAL
44TH & WORNALL RD
KANSAS CITY, MO 64111
MALLOUK, ALEXANDER G IM
4320 WORNALL RD STE 514
KANSAS CITY, MO 64111

MALLOW, JAMES E PUD
44TH AND WORNALL ROAD
KANSAS CITY, MO 64111
MANGELS, KENNETH A GP
1612 W TRUMAN RD
INDEPENDENCE, MO 64050
MANGUM, WILLIAM B OTO
434 BLUE RIDGE TOWER
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
MANION, THOS S U
1515 TRUMAN RD
INDEPENDENCE, MO 64050
MANUEL, LOUIS C OPH
1734 E 63RD ST
KANSAS CITY, MO 64110
MARKS, MARK M OS
6537 SUMMIT ST
KANSAS CITY, MO 64113
MARSH, ALICE PD
PLEASANT HILL, MO 64080
MARSHALL, CAMERON F OBG
8039 HOLMES
KANSAS CITY, MO 64131
MARSHALL, HAL E PTH
4949 ROCKHILL RD
KANSAS CITY, MO 64110
MARTIN, CATALINO V AN
101 MEMORIAL DR
ST MARYS HOSPITAL
KANSAS CITY, MO 64108
MARTIN, CLYDE V P
800 W 47TH ST
KANSAS CITY, MO 64112
MASON, WAYNE E R
6700 TROOST STE 352
KANSAS CITY, MO 64131
MASUCCI, JOS M OM
600 ARGYLE BLDG
306 EAST 12 ST
KANSAS CITY, MO 64106
MATOVICH, VIOLET B N
UNIV. OF MO. K. C.
2411 HOLMES
KANSAS CITY, MO 64108
MATTA, CAMILLE S OPH
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
MAYER, JOHN H TS
503 PLAZA PKWY BLDG
4620 J C NICHOLS PKW
KANSAS CITY, MO 64112
MC AFEE, ROBT G P
6400 PROSPECT SUITE 108
KANSAS CITY, MO 64132
MC ALLISTER, CHARLES K IM
UMKC SCHOOL OF MEDICINE
2411 HOLMES
KANSAS CITY, MO 64108
MC CALLA, JOHN P AN
649 HUNTINGTON RD
KANSAS CITY, MO 64113
MC CALLISTER, BEN D CD
4320 WORNALL RD
KANSAS CITY, MO 64111
MC CANSE, ANDREW GS
4320 WORNALL RD STE 332
KANSAS CITY, MO 64111
MC CANSE, LYNN R U
4320 WORNALL RD
KANSAS CITY, MO 64111
MC CLANAHAN, ROBT C IM
1102 GRANT AVENUE
KANSAS CITY, MO 64106
MC CONAHAY, DAVID R CD
4320 WORNALL ROAD
KANSAS CITY, MO 64111
MC CONCHIE, JAMES E R
10901 WINNER RD
INDEPENDENCE, MO 64052
MC COY, FREDERICK J PS
4177 BROADWAY
KANSAS CITY, MO 64111
MC CRAY, GLEN M CHP
24TH & GILLHAM RDS
KANSAS CITY, MO 64106
MC CULLOUGH, CAMPBELL ORS
ARGYLE BLDG
306 E 12TH ST
KANSAS CITY, MO 64106
MC DONALD, HERBERT L GS
6700 TROOST AVE
KANSAS CITY, MO 64131
MC DONNELL, JOHN F IM
4320 WORNALL RD
KANSAS CITY, MO 64111
MC ELROY, CARLA N GP
ST MARYS HOSPITAL EMERG
DEPT - 101 MEMORIAL
KANSAS CITY, MO 64108
MC FARLAND, H R N
4320 WORNALL
KANSAS CITY, MO 64111
MC FARLAND, M D IM
4320 WORNALL RD
KANSAS CITY, MO 64111
MC GANNON, PAUL T GS
6400 PROSPECT
KANSAS CITY, MO 64132

MC GUIRE, THOS H OB
4320 WORNALL RD STE 308
KANSAS CITY, MO 64111
MC INTOSH, DONALD E AN
6400 PROSPECT
KANSAS CITY, MO 64132
MC INTOSH, MICHELE C PD
11200 WINNE RD
INDEPENDENCE, MO 64052
MC INTYRE, JOHN D AN
4948 WESTWOOD RD
KANSAS CITY, MO 64112
MC KEE, FRANK E OPH
11201 COLORADO
KANSAS CITY, MO 64137
MC KEE, WALLACE P IM
4320 WORNALL RD
KANSAS CITY, MO 64111
MC KEEL, THOS B IM
615 HIGHLAND PROF
6724 TROOST
KANSAS CITY, MO 64131
MC KNELLY, WM V P
39TH & RAINBOW BLVD
KANSAS CITY, KS 66103
MC LAUGHLIN, DURNELL OPH
1734 EAST 63RD ST
SUITE 502
KANSAS CITY, MO 64110
MC LEMORE, WILLIE O IM
UMKC SCHOOL OF MEDICINE
2411 HOLMES
KANSAS CITY, MO 64108
MC MILLAN, THOS E U
8201 DEARBORN DR
SHAWNEE MISSION, KS 66208
MC NABNEY, W K GS
TRUMAN MEDICAL CTR
2301 HOLMES
KANSAS CITY, MO 64108
MC NUTT, THEODORE L GP
LEES SUMMIT CLINIC
615 W 3RD STREET
LEE'S SUMMIT, MO 64063
MEDLEY, BENJAMIN E DR
1010 CARONDELET DR
SUITE 114
KANSAS CITY, MO 64114
MEDLICOTT, WILLIAM J ORS
4320 WORNALL RD
KANSAS CITY, MO 64111
MEEGAN, ROBT J R
2929 BALTIMORE AVE
KANSAS CITY, MO 64108
MEHTA, SATISH K IM
701 E 63RD #312
KANSAS CITY, MO 64110
MEIKLEJOHN, DUNCAN C OBG
2116 S STERLING
INDEPENDENCE, MO 64052
MELGAARD, SVEN R AN
6601 ROCKHILL ROAD
KANSAS CITY, MO 64131
MENENDEZ, JOSE O P
1505 WEST TRUMAN RD.
INDEPENDENCE, MO 64050
MERVEILLE, OCTAVE C OS
24TH AND GILLHAM RD
KANSAS CITY, MO 64108
METZL, KURT PD
601 E 63RD
KANSAS CITY, MO 64110
MEYER, PAUL W ORS
4320 WORNALL RD
KANSAS CITY, MO 64111
MILES, GEO O GS
4320 WORNALL RD
KANSAS CITY, MO 64111
MILGRAM, BYRON A P
6724 TROOST
KANSAS CITY, MO 64131
MILLER, CLINT L OM
615 W 3RD ST
LEE'S SUMMIT, MO 64063
MILLER, GERALD L OBG
2929 BALTIMORE STE 200
KANSAS CITY, MO 64108
MILLER, GERALD L OBG
SUITE 212
RESEARCH MEDICAL OFF
KANSAS CITY, MO 64132
MILLER, MAX I AN
5620 HIGH DR
SHAWNEE MISSION, KS 66208
MILLER, WILSON H IM
511 PLAZA PKWY BLDG
4620 NICHOLS PKWY
KANSAS CITY, MO 64112
MINNIGERODE, LANA K PM
REHABILITATION INST.
3011 BALTIMORE
KANSAS CITY, MO 64108
MINNIGERODE, TURNER L IM
2316 E MEYER BLVD
KANSAS CITY, MO 64132
MIR, ABDUL R IM
1734 E 63RD ST
KANSAS CITY, MO 64110

MITCHELL, ANDREW D 4320 WORNALL RD KANSAS CITY, MO 64111	U
MITCHELL, JOHN D 220 PENN PARK 2928 MAIN KANSAS CITY, MO 64108	U
MITCHELL, ROBT H 410 BRYANT BLDG 1102 GRAND AVE KANSAS CITY, MO 64106	OBG
MITRA, NIRMAL K 112TH TERR & GRANDVIEW KANSAS CITY, MO 64137	PD
MIXSON, WM C 4320 WORNALL RD KANSAS CITY, MO 64111	OBG
MONTELLO, SAMUEL A 308 MEDICAL PLAZA 4320 WORNALL RO KANSAS CITY, MO 64111	OBG
MOONEY, JUSTIN L 6740 W 52ND PL SHAWNEE MISSION, KS 66202	D
MOORE, DAVID L 4400 BROADWAY KANSAS CITY, MO 64111	GS
MOORE, JACK D 4320 WORNALL RD KANSAS CITY, MO 64111	U
MOORE, ROBT A P O BOX 679 KANSAS CITY, MO 64141	OM
MOREANO, ARMANDO H 21 W 43RD ST KANSAS CITY, MO 64111	GP
MORGAN, DAVID B 4620 J C NICHOLS PKWY KANSAS CITY, MO 64112	D
MORGAN, WM R CARONDELET MEDICAL BLDG 1010 CARONDELET DR-S KANSAS CITY, MO 64114	PS
MORLEY, LOUISE A 4907 NEOSHO SHAWNEE MISSION, KS 66205	GP
MORRIS, J H 4240 BLUE RIDGE BLVD KANSAS CITY, MO 64133	IM
MORRISON, DONALO H 4545 WORNALL RD KANSAS CITY, MO 64111	AN
MORRISON, J S 424 NICHOLS RD KANSAS CITY, MO 64112	P
MDSBACHER, HUGH E 919 LAKE OR CT INDEPENDENCE, MO 64055	PS
MDSS, PAUL 4706 BROADWAY KANSAS CITY, MO 64112	GE
MDUNTFORD, DAMON W 9503 E 63RD ST KANSAS CITY, MO 64133	OS
MUELLER, MARTIN J 11723 CENTRAL KANSAS CITY, MO 64114	IM
MUENCH, LAURENCE W 508 MEDICAL PLAZA 4320 WORNALL RO. KANSAS CITY, MO 64111	AN
MULLEN, LEO M 4443 PASEO BLVD KANSAS CITY, MO 64110	GP
MUNDY, WM L 4643 WYANDOTTE KANSAS CITY, MO 64112	IM
MUNYAN, EARL A 17221 E 23RD SUITE 107 INDEPENDENCE, MO 64057	IM
MURPHY, JAMES J C/O SITES 7829 HEDGES KANSAS CITY, MO 64138	OS
MURPHY, ROBT J 4320 WORNALL RD KANSAS CITY, MO 64111	D
MURRAY, W L 416 CARONDELET MEDICAL 1010 CARONDELET DR KANSAS CITY, MO 64114	OPH
MUTCHNICK, NORMAN 6724 TROOST SUITE 910 KANSAS CITY, MO 64131	GS
MUTH, ROBT G 8229 BELINDER RD. SHAWNEE MISSION, KS 66206	IM
MYERS, ANDREW I 9786 W 101 ST TERR OVERLAND PARK, KS 66212	OS
MYERS, GEO H 1010 CARONDELET DR KANSAS CITY, MO 64114	U
MYERS, JOHN S 425 HUNTINGTON RD KANSAS CITY, MO 64113	OM
MYERS, ROBT M 906 GRAND AVE KANSAS CITY, MO 64106	GP
MYRON, MARK C 8300 TROOST AVE KANSAS CITY, MO 64131	IM
NAIME, MANSOUR J 136 ROCKHILL MED BLDG 6700 TROOST KANSAS CITY, MO 64131	PD
NAVATO, JOSE M 1505 W TRUMAN RD INDEPENDENCE, MO 64050	P
NELSON, BENTLEY A 1010 CARONDELET DR. SUITE 224 KANSAS CITY, MO 64114	OTO
NESSELRODE, JOHN H 1515 W TRUMAN RD STE 402 INDEPENDENCE, MO 64050	GS
NEUMANN, JAMES W 2929 BALTIMORE STE 215 KANSAS CITY, MO 64108	N
NEWMAN, ROBT L ST LUKES HOSP 44TH & WORNALL RO KANSAS CITY, MO 64111	OBG
NICHOLIS, GEORGE R 373 W. 101ST TERR. KANSAS CITY, MO 64114	PD
NIELSON, MICHAEL H 1515 W TRUMAN RD ST 3D6 INDEPENDENCE, MO 64050	OBG
NIGRO, EDWARD R 1340 S OCN BLV #2209 POMPANO BEACH, FL 33062	CD
NIGRO, JOS A 5715 WINDSOR OR SHAWNEE MISSION, KS 66205	GP
NOBACK, RICHARDSON K UMKC SCHOOL OF MED 2411 HOLMES KANSAS CITY, MO 64108	IM
NOLTENSMEYER, MILTON H 3305 W 50TH TERR SHAWNEE MISSION, KS 66205	AN
NOVAK, EDWARD J 3011 BALTIMORE KANSAS CITY, MO 64108	PM
O'FARRELL, THOS P 300 RESEARCH MED OFFICE 6400 PROSPECT KANSAS CITY, MO 64132	GS
O'HEARNE, JOHN J 4706 BROADWAY KANSAS CITY, MO 64112	P
O'KELL, RICHARD T ST LUKES HOSP DEPT PATH 44TH & WORNALL RD KANSAS CITY, MO 64111	PTH
O'MALLEY, JAMES F 6700 TROOST KANSAS CITY, MO 64131	U
O'NEIL, JAMES H 275 TAIT TERRACE SE PORT CHARLOTTE, FL 33952	GS
OLSON, LLOYD C 24TH AND GILLHAM RD CHILDRENS MERCY HOSP KANSAS CITY, MO 64108	PD
OSBORNE, JERE O 644 W 69TH TERRACE KANSAS CITY, MO 64113	OM
OST, MARK D 6550 B TROOST KANSAS CITY, MO 64131	PTH
OVERESCH, HARRY B 6400 PROSPECT AVE KANSAS CITY, MO 64132	ORS
OWENS, JAMES L 302 BROADWAY MED. BLDG 4400 BROADWAY KANSAS CITY, MO 64111	OBG
OWENS, RICHARD L 207 W 116TH ST KANSAS CITY, MO 64114	OM
OWENS, ROBT H 6700 TROOST 408 KANSAS CITY, MO 64131	U
OXLEY, DWIGHT K 5105 SOMERSET DR. PRAIRIE VILLAGE, KS 66207	CLP
OZAR, MILTON B 1206 W 62ND KANSAS CITY, MO 64113	U
PACK, GARY L SUITE 117 4706 BROADWAY KANSAS CITY, MO 64112	N
PADULA, RICHARD T 207 HIGHLAND PROFESSION 6724 TROOST KANSAS CITY, MO 64131	GS
PAKULA, SIDNEY F P O BOX 8552 10839 STATE LINE RD KANSAS CITY, MO 64114	PD
PALAZOLA, JOSEPH M 4320 WORNALL SUITE 440 KANSAS CITY, MO 64111	IM
PARELMAN, ALLEN G 6724 TROOST AVE #303 KANSAS CITY, MO 64131	OPH
PARKER, HUBERT M 2929 BALTIMORE SUITE 43 KANSAS CITY, MO 64108	CO
PARKINS, GEORGE K 500 PENN PARK 2929 BALTIMORE KANSAS CITY, MO 64108	ORS
PARSONS, EUGENE O 145 STATE LINE KENNETH STANLEY, KS 66223	GS
PATEL, MUNIKUMAR H 9501 WATERTOWN PLANK RD MILWAUKEE, WI 53226	P
PAWSAT, JOHN E 1210 W 58TH ST KANSAS CITY, MO 64113	ORS
PECORARO, ANTHONY P 4400 BROADWAY KANSAS CITY, MO 64111	PD
PEETE, DON C CONCORD BLDG. APT 908 4525 COVE CIRCLE NORTH ST. PETERSBURG, FL 33708	CD
PELEGRIN, ROBERT J 66 THIRD ST. S.E. HURON, SD 57350	U
PEMBERTON, LOARN B TRUMAN MEDICAL CENTER 2301 HOLMES KANSAS CITY, MO 64108	GS
PENNER, STANLEY 1010 CARONDELET DR. KANSAS CITY, MO 64114	PO
PERICO, CARLOS J 9209 ROD SHAWNEE MISSION, KS 66207	US
PERLL, MAURICE F 1D10 CARONDELET DR. #426 KANSAS CITY, MO 64114	ORS
PERLL, RITA D 600 E 22ND STREET KANSAS CITY, MO 64108	CHP
PETERSEN, EUGENE G 108 HACKBERRY LEE'S SUMMIT, MO 64063	R
PETERSON, BONITA J 4550 WARWICK BLVD APT 2 KANSAS CITY, MO 64111	PTH
PETERSON, CARL M 2701 E 31ST ST KANSAS CITY, MO 64128	GS
PETERSON, JAY T 4320 WORNALL RD SUITE 212 KANSAS CITY, MO 64111	IM
PETERSON, WALTER R 2701 E 31ST ST KANSAS CITY, MO 64128	GS
PETRY, EZRA L 13740 W 90TH PL APT 1 LENEXA, KS 66215	GP
PFEFFER-HURWITZ, JUDITH CHILDRENS MERCY HOSPITA 24TH AND GILLHAM RD KANSAS CITY, MO 64108	CHP
PHILLIPS, THOMAS P 610 MEDICAL PLAZA 4320 WORNALL RD. KANSAS CITY, MO 64111	ORS
PICKARD, NICHOLAS S 6210 HIGH DR SHAWNEE MISSION, KS 66208	ORS
PICKERING, LEE I 1515 W TRUMAN ROAD INDEPENDENCE, MO 64050	IM
PIEBENGA, LARRY W 4400 BROADWAY KANSAS CITY, MO 64111	OPH
PIEPERGERDES, LARRY G 4240 BLUE RIDGE BLVD KANSAS CITY, MO 64133	OPH
PINGLETON, SUSAN K UMKC SCHOOL OF MEDICINE 2411 HOLMES KANSAS CITY, MO 64108	IM
PINKERTON, JOS A 4320 WORNALL ROAD KANSAS CITY, MO 64111	GS
PINSKER, OSCAR T HIGHLANDS PROF TOWER 6724 TROOST KANSAS CITY, MO 64131	OTO
PIPER, DONALD K 1010 CARONDELET DR. #426 KANSAS CITY, MO 64114	ORS
PIPKIN, GARRETT R R #2 CLINTON, MO 64735	ORS
PITIYANUVATH, TASANAPORN 825 EUCLID KANSAS CITY, MO 64124	PD
PLACE, KENNETH C 130 PENN PARK 2928 MAIN KANSAS CITY, MO 64108	OPH

POLITI, GREGORY B AN
31ST & WYANDOTTE
KANSAS CITY, MO 64108
POLLAK, ERICH W OS
MENORAH MEDICAL CENTER
4949 ROCKHILL RD
KANSAS CITY, MO 64110
POLLOCK, LEO H GS
6601 WENONGA TERRACE
SHAWNEE MISSION, KS 66208
POONAWALA, HUSENI E CHP
4400 BROADWAY SUITE 202
KANSAS CITY, MO 64111
PORTER, LOUIS AN
12 OOCTORS BLEG. EAST
751 E. 63RD ST.
KANSAS CITY, MO 64110
PORTER, MICHAEL J AN
6925 BELINDER
SHAWNEE MISSION, KA 66208
POSTMA, GEORGE S IM
373 W 101ST TERRACE
KANSAS CITY, MO 64114
POTTS, DONALD A GP
1515 W TRUMAN RD NO 504
INDEPENDENCE, MO 64050
POWELL, ALAN E PD
17221 E 23RD ST
INDEPENDENCE, MO 64057
POWELL, NELSON E PTH
ST LUKES HOSP PATH DEPT
44TH & WORNALL RD
KANSAS CITY, MO 64111
PRINTZ, JOS H GS
601 E 63RD ST
KANSAS CITY, MO 64110
PRINTZ, OTTO J GS
601 E 63RD ST
KANSAS CITY, MO 64110
PROSTIC, EDWARD J ORS
6724 TROOST SUITE 800
KANSAS CITY, MO 64131
PRYOR, HAROLD J PM
RESEARCH HOSPITAL
MEYER ANO PROSPECT
KANSAS CITY, MO 64132
PUCCI, GREGORY L NS
1010 CARONDELET DR
SUITE 101
KANSAS CITY, MO 64114
PUGH, RICHARD G PD
1612 W TRUMAN RD
INDEPENDENCE, MO 64050
QUER, ERICH A GS
6400 PROSPECT AVE
KANSAS CITY, MO 64132
RADER, ADA E GP
13414 LOCUST ST
KANSAS CITY, MO 64145
RAICH, ROBT A IM
4320 WORNALL RD RM 440
KANSAS CITY, MO 64111
RAMEY, EHRET O OBG
4320 WORNALL AVE
KANSAS CITY, MO 64111
RAMOS, AMERICO G TS
348 ROCKHILL MED BLOG
6700 TROOST
KANSAS CITY, MO 64131
RAMOS, ROCHE P PTH
KC COLLEGE OF OST MED C
2105 INDEPENDENCE BL
KANSAS CITY, MO 64124
RANNIE, PAUL R AN
709 S FULLER ST
INDEPENDENCE, MO 64050
RAU, JEROLD D
315 NICHOLS RD
SUITE 235
KANSAS CITY, MO 64112
RAUKTIS, ROBERT F R
DEPT OF RADIOLOGY
ST LUKE'S HOSP
KANSAS CITY, MO 64111
RAVIS, MARK S GP
616 E 63RD ST
KANSAS CITY, MO 64110
RECTOR, JOE L TR
710 MEDICAL PLASA
4320 WORNALL RD.
KANSAS CITY, MO 64111
REDDIN, JACK L IM
17221 E 23RD ST STE 209
INDEPENDENCE, MO 64057
REED, WM A TS
4320 WORNALL RD
KANSAS CITY, MO 64111
REINHARDT, G R GS
228 RESEARCH MED OFF BL
6400 PROSPECT
KANSAS CITY, MO 64132
REISS, JEANNE E OS
P O BOX 7252
KANSAS CITY, MO 64113
REISTER, DOROTHY D PD
5201 W 84TH
SHAWNEE MISSION, KS 66207

REISTER, PHILIP D GP
701 E 63RD STE 211
KANSAS CITY, MO 64110
REMKUS, JAMES E IM
6724 TROOST
KANSAS CITY, MO 64131
RENGACHARY, DHANALAKSHMI OBG
210 SPRUCE
LEE'S SUMMIT, MO 64063
REYNOLDS, CLARENCE C IM
1734 E 63RD ST
SUITE 605
KANSAS CITY, MO 64110
REYNOLDS, JAMES D GE
4320 WORNALL RD
KANSAS CITY, MO 64111
RHODES, ANDREW J NS
SUITE 503
1515 W TRUMAN RD
INOEPENDENCE, MO 64055
RHODES, PHILIP G PD
UNIV. OF MISS. MED. CTR.
2500 N. STATE ST.
JACKSON, MS 39216
RICCI, WALTER F P
6724 TROOST
KANSAS CITY, MO 64131
RICE, BERNARD F IM
2411 HOLMES
KANSAS CITY, MO 64108
RICHARDSON, MARION W OBG
2526 PROSPECT
KANSAS CITY, MO 64127
RICHERT, ROBT C PTH
504 W 96TH ST
KANSAS CITY, MO 64114
RIEKHOF, PAUL L OBG
4320 WORNALL RD
KANSAS CITY, MO 64111
RILEY, J P R
PARTHENON, AR 72666
RILLER, LOWELL E ORS
1600 PROFESSIONAL BLDG
1103 GRAND AVE
KANSAS CITY, MO 64106
RIPPEY, JOHN H PTH
WORNALL RD AT 44TH ST
KANSAS CITY, MO 64111
RITTER, WILLIAM S CD
ST. MARY'S HOSP.
101 MEMORIAL DR.
KANSAS CITY, MO 64108
RIVERA, MICHELE K PTH
LAKESIDE HOSPITAL
8701 TROOST
KANSAS CITY, MO 64131
ROBB, CHRISTINE A GP
1109 S. LINCOLN AVE.
URBANA, IL 61801
ROBERTS, FRED F PDR
DEPT OF RAOIOLOGY
ST JOSEPH HOSP
KANSAS CITY, MO 64114
ROBERTS, GROSVENOR G OM
777 N BLUE PKWY
LEE'S SUMMIT, MO 64063
ROBERTS, HAROLO M IM
216 W 99TH TERR
KANSAS CITY, MO 64114
ROBINETT, WADE V OTO
6700 TROOST STE 616
KANSAS CITY, MO 64131
ROBINSON, ARTHUR W IM
4320 WORNALL RD
KANSAS CITY, MO 64111
ROBINSON, ERNEST K IM
1015 W 58TH TERR
KANSAS CITY, MO 64113
ROBINSON, WM J P
9931 LEE CIRCLE
LEAWOOO, KS 66206
ROBLES, LUIS H IM
301 CARONDELET MEO. 8LDG.
1010 CARONDELET DR
KANSAS CITY, MO 64114
RODGERS, GEO H U
232 RESEARCH MED OFF BL
6400 PROSPECT
KANSAS CITY, MO 64132
RODGERS, SAML U OS
2701 E 31ST ST
KANSAS CITY, MO 64128
ROFAIL, AMIN A AN
9206 ENGLAND
SHAWNEE MISSION, KS 66212
ROGERS, ROBT L OTO
6724 TROOST AVE STE 200
KANSAS CITY, MO 64131
*ROMITO, ANTHONY J GP
5529 TROOST
KANSAS CITY, MO 64110
ROPE, DOUGLAS M IM
373 W. 101ST TERR.
KANSAS CITY, MO 64114
ROSENBERG, ISAC PD
1010 CARONDELET DR.
KANSAS CITY, MO 64114
ROSS, ROBERT M
373 W 101ST TERR
KANSAS CITY, MO 64114

ROTH, ALFRED D AN
100 ROCKHILL MED BLDG
6700 TROOST
KANSAS CITY, MO 64131
ROZEN, JAY I R
6400 PROSPECT
KANSAS CITY, MO 64132
RUBIN, HARVEY P CO
701 E 63RD ST STE 308
KANSAS CITY, MO 64110
RU8NITZ, LEON H AN
751 E 63RD STE 12
KANSAS CITY, MO 64110
RUES, LAWRENCE A GP
GOPPER FAMILY CARE CENT
6601 ROCKHILL RO
KANSAS CITY, MO 64131
RUFE, JOHN R OPH
4400 BROADWAY
KANSAS CITY, MO 64111
RUSSELL, JAMES L TS
330 PENN PARK BLDG
2929 BALTIMORE
KANSAS CITY, MO 64108
RUSSELL, ROBT K GP
8933 ROSE LANE
KANSAS CITY, MO 64133
RUTHERFORO, BARRY D IM
4320 WORNALL RD
410 MEDICAL PLAZA
KANSAS CITY, MO 64111
RYAN, MICHAEL E N
SUITE 210
4601 WEST 109TH ST
SHAWNEE MISSION, KA 66211
SABATES, FELIX N OPH
110 ROCKHILL MED BLDG
6700 TROOST
KANSAS CITY, MO 64131
SAFERSTEIN, A L AN
751 E 63RD ST
KANSAS CITY, MO 64110
SAFLEY, THOS J GS
17221 E 23RD ST
INDEPENOENCE, MO 64057
SALADINO, ANTHONY GP
2009 W 67TH ST
SHAWNEE MISSION, KS 66208
SALOANA, DAHLIA IM
9103 E 40TH HWY
INDEPENDENCE, MO 64055
SAMUELSON, EOWARD A GP
706 W 112TH ST
KANSAS CITY, MO 64114
SANDERS, OONALD C P
411 NICHOLS RD
KANSAS CITY, MO 64112
SANDERS, HARMON U OPH
115 HUMPHREY ST
GREENWOOD, MS 38930
SANDERS, WM F IM
411 NICHOLS RD
KANSAS CITY, MO 64112
SANDOW, THEOOORE L ORS
4320 WORNALL RD
KANSAS CITY, MO 64111
SANTORO, CARLOS G GS
1103 WESTPORT RD
KANSAS CITY, MO 64111
SAUER, GORDON C O
6400 PROSPECT
KANSAS CITY, MO 64132
SCHAERRER, WM C CRS
4545 WORNALL RO
APT. 911
KANSAS CITY, MO 64111
SCHARF, DANIEL IM
4949 ROCKHILL RD
MENORAH MEDICAL CTR
KANSAS CITY, MO 64110
SCHIFFMACHER, JACK E R
4517 W 65TH ST
PRAIRIE VILLAGE, KS 66208
SCHILLIE, GENE A OBG
6400 PROSPECT ST
KANSAS CITY, MO 64132
SCHLOZMAN, DANL L PUD
6724 TROOST AVE STE 400
KANSAS CITY, MO 64131
SCHOOLMAN, ARNOLD NS
400 ROCKHILL MED. 8LDG.
6700 TROOST
KANSAS CITY, MO 6413I
SCHOTTMAN, GERHARD W R
710 MEDICAL PLAZA
4320 WORNALL RD.
KANSAS CITY, MO 64111
SCHUMAN, NORVIN O PTH
MEYER 8LVD AT PROSPECT
KANSAS CITY, MO 64132
SCHUTZ, CARL H GS
841 SAN PABLO OR
SAN MARCOS, CA 92069
SCHUTZ, RICHARD 8 OBG
603 A LILAC PL
LEE'S SUMMIT, MO 64063
SCHWEGLER, ROBERT G DR
10235 CATALINA
SHAWNEE MISSION, KS 66207

---

* Doctor of Osteopathy

SCOTT, JOHN E DR
117 TEAKWOOD
LEE'S SUMMIT, MO 64063
SEELY, CLARK W PD
3000 W 68TH ST
SHAWNEE MISSION, KS 66208
SEIDEN, GERALD O OTO
6724 TROOST
KANSAS CITY, MO 64131
SEITZ, ELSON F PTH
1509 W TRUMAN RD CLINIC
INDEPENDENCE, MO 64050
SELLS, KENNETH J GP
2929 BALTIMORE STE 310
KANSAS CITY, MO 64108
SESHUMURTY, PONNURU PD
CHILDREN'S MERCY HOSP.
24TH & GILLHAM RD.
KANSAS CITY, MO 64108
SESHUMURTY, VIMALA PD
4900 SWOPE PARKWAY
KANSAS CITY, MO 64130
SHALET, MALCOLM F IM
6724 TROOST AVE STE 500
KANSAS CITY, MO 64131
SHALLEY, JACK E P
4240 BLUE RIDGE BLVD ST
KANSAS CITY, MO 64133
SHANK, NEIL A IM
701 E 63RD ST
KANSAS CITY, MO 64110
SHANKER, STUART G PD
373 W 101ST TERRACE
KANSAS CITY, MO 64114
SHAPIRO, LAZARE M IM
P O BOX 1441
SUN CITY, AZ 85351
SHARMA, JANARDANA N IM
208 MEDICAL PLAZA
4320 WORNALL RD
KANSAS CITY, MO 64111
SHARMA, VIDYA IM
CHILDREN'S MERCY HOSP
24TH & GILLHAM RD
KANSAS CITY, MO 64108
SHEAHON, JOHN A OBG
6700 RAYTOWN RD
RAYTOWN, MO 64133
SHECHTER, NATHAN ORS
601 E 63RD ST
KANSAS CITY, MO 64110
SHEEHAN, MICHAEL B PD
628 GREENWAY TER
KANSAS CITY, MO 64113
SHELDEN, RUSSELL O AN
816 W 58TH TERRACE
KANSAS CITY, MO 64113
SHIFRIN, ALEXANDER IM
6700 TROOST AVE
KANSAS CITY, MO 64131
SHOCKLEY, CLARENCE J OBG
615 W 3RD ST
LEE'S SUMMIT, MO 64063
SHUEY, HERBERT H GP
3 E GREGORY ST
KANSAS CITY, MO 64114
SICAT, LUZVIMINDA F DR
CHILDREN'S MERCY HOSP
24TH AND GILLHAM RD.
KANSAS CITY, MO 64108
SIEGEL, CARL O GP
4220 HUDSON
METAIRIE, LA 70002
SIMMONS, DONALD O P
4301 MAIN ST STE 14
KANSAS CITY, MO 64111
SIMMONS, JOHN L U
6400 PROSPECT
KANSAS CITY, MO 64132
SIMON, SANFORD GS
6724 TROOST STE 410
KANSAS CITY, MO 64131
SINCLAIR, RICHARD H OBG
4320 WORNALL RD STE 308
KANSAS CITY, MO 64111
SINGLETON, CHARLES M IM
4320 WORNALL RD STE 624
KANSAS CITY, MO 64111
SINGLETON, JOHN M IM
4400 BROADWAY SUITE 310
KANSAS CITY, MO 64111
SIRRIDGE, MARJORIE J IM
2411 HOLMES
KANSAS CITY, MO 64108
SIRRIDGE, WM T IM
TRUMAN MEDICAL CTR
2301 HOLMES
KANSAS CITY, MO 64108
SKILLMAN, ROBT K IM
4320 WORNALL RD
KANSAS CITY, MO 64111
SKINNER, JOHN T GP
1102 GRAND AVE
KANSAS CITY, MO 64106
SLANKARD, J E OBG
4320 WORNAL RD
KANSAS CITY, MO 64111

SLENTZ, EDWIN L IM
4320 WORNALL RD
KANSAS CITY, MO 64111
SLENTZ, WM A IM
4320 WORNALL RD
KANSAS CITY, MO 64111
SLICKMAN, ROBT A OBG
2929 BALTIMORE
KANSAS CITY, MO 64108
SMITH, ARTHUR B R
6400 PROSPECT
KANSAS CITY, MO 64132
SMITH, ELBERT E PD
4400 BROADWAY
KANSAS CITY, MO 64111
SMITH, HUBERT E OS
5104 E 24TH ST
KANSAS CITY, MO 64127
SMITH, IRA T U
6400 PROSPECT ST
KANSAS CITY, MO 64132
SMITH, JAMES M US
614 W 39TH ST
KANSAS CITY, MO 64111
SMITH, JOHN C PTH
TRUMAN MEDICAL CTR
2301 HOLMES
KANSAS CITY, MO 64108
SMITH, KATHERINE A PD
411 NICHOLS RD
KANSAS CITY, MO 64112
SMITH, OTHELLO D PTH
6550-C TROOST
KANSAS CITY, MO 64131
SMITH, THOMAS H R
DEPT OF RADIOLOGY UNIV
CHARLOTTESVILLE, VA 22901
SMITH, WALLACE B OPH
3611 SOUTH DELAWARE
INDEPENDENCE, MO 64055
SMULL, NED W PD
AM ACADEMY OF PED.
1801 HINMAN AVE
EVANSTON, IL 60204
SNEID, DAVID S IM
MENORAH MED. CTR.
4949 ROCKHILL
KANSAS CITY, MO 64110
SNIDER, WILBUR R GS
TRUMAN MEDICAL CTR
2301 HOLMES
KANSAS CITY, MO 64108
SOLOMON, WILLIAM A IM
TRUMAN MEDICAL CENTER
2301 HOLMES
KANSAS CITY, MO 64108
SOPER, MICHAEL R IM
373 W 101ST TERR
KANSAS CITY, MO 64114
SOPER, STEVEN J P
1505 W TRUMAN RD
INDEPENDENCE, MO 64050
SPAFFORD, ALLEN L IM
5551 BELINDER RD
SHAWNEE MISSION, KS 66205
SPALDING, WILBER B OPH
2928 MAIN ST
KANSAS CITY, MO 64108
SPENCER, DONALD M ORS
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
SPIES, BARBARA C GP
11201 COLORADO
KANSAS CITY, MO 64134
SPURNEY, JOE E GP
11201 COLORADO
KANSAS CITY, MO 64137
SPURNY, OTTO M IM
6400 CHERRY
KANSAS CITY, MO 64131
STAAB, GERALD E US
6700 TROOST
KANSAS CITY, MO 64131
STACEY, WALLACE R OBG
2116 S STERLING
INDEPENDENCE, MO 64052
STAGGS, WM A U
2929 BALTIMORE AVE STE
KANSAS CITY, MO 64108
STANLEY, CHARLES G OM
RICHARD CABOT CLINIC
1810 SUMMIT ST.
KANSAS CITY, MO 64108
STANLEY, JOHN H CHP
4400 BROADWAY
KANSAS CITY, MO 64111
STATLAND, HARRY IM
STATLAND CLINIC
6724 TROOST-SUITE 71
KANSAS CITY, MO 64131
STATLAND, MORRIS IM
STATLAND CLINIC
6724 TROOST-SUITE 71
KANSAS CITY, MO 64131
STEEL, MAXWELL W IM
P O BOX 1159
BENDIX CORP KC DIV
KANSAS CITY, MO 64141

STEFFEN, LAWRENCE F CD
411 NICHOLS RD STE 212
KANSAS CITY, MO 64112
STELLE, CHAS W OM
9540 MISSION RD
SHAWNEE MISSION, KS 66206
STELMACH, WALTER J GP
5252 SUNSET DR
KANSAS CITY, MO 64112
STEPHENS, JACK O AN
751 E 63RD ST
KANSAS CITY, MO 64110
STERN, THOS L GP
1740 W 92ND ST
KANSAS CITY, MO 64114
STEWART, HARRY A P
4706 BROADWAY STE 105
KANSAS CITY, MO 64112
STITT, RONALD W JR ORS
300 HIGHLANDS PROF. TOWER
6724 TROOST
KANSAS CITY, MO 64131
STOCKTON, RAYMOND W U
4320 WORNALL RD
KANSAS CITY, MO 64111
STOCKWELL, ARTHUR L U
DIVISION OF UROLOGY
TRUMAN MEDICAL CTR
KANSAS CITY, MO 64108
STOUT, CARL N OPH
701 BLUE RIDGE TOWER
4240 BLUE RIDGE
KANSAS CITY, MO 64133
STRATEMEIER, EDWARD H R
31ST AND WYANDOTTE
KANSAS CITY, MO 64108
STRAUSS, CARL F IM
8300 TROOST AVE
KANSAS CITY, MO 64131
STRIBLING, THOS L OBG
2116 STERLING AVE
INDEPENDENCE, MO 64052
STROMBERG, ERIC O AN
6400 PROSPECT AVE
KANSAS CITY, MO 64132
SUDDARTH, STERLING B PD
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
SULIT, ARNULFO P IM
101 MEMORIAL DR
KANSAS CITY, MO 64108
SUSEELA, DASARI PD
4900 SWOPE PKWY
KANSAS CITY, MO 64130
SUTTON, RICHARD L D
3203 W 83RD TERRACE
SHAWNEE MISSION, KS 66206
SWARTWOUT, JOSEPH R OBG
373 W. 101ST TERR.
KANSAS CITY, MO 64114
SWISHER, ROBT C R
600 LILAC LN
SACRAMENTO, CA 95825
SZABADOS, ERNEST O ORS
17221 E 23RD ST
INDEPENDENCE, MO 64057
SZYMANSKI, DENNIS C NS
CHIEF DIV OF NEUROSURG
TRUMAN MED CENTER
KANSAS CITY, MO 64108
TAKAHASHI, HIROAKI OS
THE CHILDREN'S MERCY HO
24TH AT GILLHAM RD
KANSAS CITY, MO 64108
TALBOTT, LAWRENCE B PTH
12012 FAIRWAY
SHAWNEE MISSION, KS 66209
TAMBLYN, M C AN
3515 W 63RD ST
PRAIRIE VILLAGE, KS 66208
TAORMINA, MARC K IM
1621 NE CLUBHOUSE DR
KANSAS CITY, MO 64116
TAPUZ, JAIME T AN
600 EAST 8TH ST
KANSAS CITY, MO 64106
TARSON, SOLOMON S OS
5511 W 85TH ST
SHAWNEE MISSION, KS 66207
TASKER, CHAS B AN
11083 BURNTWOOD DR
SUN CITY, AZ 85351
TERRY, THOMAS L CO
TRUMAN MEDICAL CENTER
LEE'S SUMMIT
KANSAS CITY, MO 64139
THALBLUM, HARVEY OR
6400 PROSPECT STE 216
KANSAS CITY, MO 64132
THEEL, OTTO W GP
4301 MAIN ST
KANSAS CITY, MO 64111
THIELE, GEO H CRS
121 W 48TH ST APT 705
KANSAS CITY, MO 64112
THOMAS, CHRISTOPHER Y GS
4320 WORNALL RD
KANSAS CITY, MO 64111

---

* Doctor of Osteopathy

*THOMAS-RICHARDS, JOSE R ORS
SUITE 266
751 E. 63RD ST.
KANSAS CITY, MO 64110
THOMPSON, CHAS L IM
4320 WORNALL RD SUITE 5
KANSAS CITY, MO 64111
THRONE, BENNIE J TR
6724 TROOST STE 407
KANSAS CITY, MO 64131
THRONE, ELIAS M PM
RESEARCH MEDICAL CENTER
KANSAS CITY, MO 64132
TICE, WAYNE K DR
3626 BLUE JACKET DRIVE
LEE'S SUMMIT, MO 64063
TILLEMA, DAVID A ORS
6306 MORNINGSIDE OR
KANSAS CITY, MO 64113
TIOJANCO, MILAGROS E AN
11807 WASHINGTON
KANSAS CITY, MO 64114
TIOJANCO, REYNALDO R GP
5801 EAST 113TH STREET
KANSAS CITY, MO 64134
TITTERINGTON, FRANK W IM
236 MEDICAL PLAZA
4320 WORNALL RO
KANSAS CITY, MO 64111
TOUBES, DANIEL B IM
8300 TROOST ST
KANSAS CITY, MO 64131
TRIMBLE, GEO X IM
101 MEMORIAL DR
KANSAS CITY, MO 64108
TROEH, MELVIN R IM
1515 W TRUMAN RD STE 30
INDEPENDENCE, MO 64050
TROWBRIDGE, BARNARD C OTO
415 E 63RO ST
KANSAS CITY, MO 64110
TROWBRIDGE, ELLSWORTH P
18435 101ST DR
SUN CITY, AZ 85373
TUOHY, GERALD F AN
44TH & WORNALL RD
KANSAS CITY, MO 64111
TURANO, WM L OBG
6700 RAYTOWN RD
RAYTOWN, MO 64133
TURNER, RONALD M GS
1515 W TRUMAN RO STE 40
INDEPENDENCE, MO 64050
TUTERA, DOMINIC F OBG
4400 BROADWAY
KANSAS CITY, MO 64111
TWIN, EDWARD J IM
24TH & CHERRY STS
KANSAS CITY, MO 64108
TWYMAN, RICHARD A GS
7919 BRISTOL CT
SHAWNEE MISSION, KS 66208
UNOERWOOD, DICK H OPH
6700 TROOST AVE STE 624
KANSAS CITY, MO 64131
UPSHER, ALBERT E PTH
BOX 2778
KANSAS CITY, MO 64142
VALENTINE, JOHN D EM
MENORAH MEDICAL CTR.
4949 ROCKHILL RD.
KANSAS CITY, MO 64110
VALINS, EUGENE P
601 E 63RO ST
SUITE 309
KANSAS CITY, MO 64110
VAN BIBER, JAMES T PD
1612 W TRUMAN RD
INDEPENDENCE, MO 64050
VAN BUSKIRK, TERRANCE E GP
5246 ST JOHN AVE
KANSAS CITY, MO 64123
VAN BUSKIRK, WM C GS
6700 TROOST SUITE 308
KANSAS CITY, MO 64131
VAUGHN, JAMES W P
411 NICHOLS RO-STE 208
KANSAS CITY, MO 64112
VENEGONI, ROBT L AN
6700 TROOST
KANSAS CITY, MO 64131
VERA, ENRIQUE P
6724 TROOST
KANSAS CITY, MO 64131
VERGARA, GERARDO G PTH
31ST & WYANDOTTE
KANSAS CITY, MO 64108
VICTOR, FRANK R DR
900 HIGHLAND PROF TOWER
6724 TROOST
KANSAS CITY, MO 64131
VIDALS, VICTOR G GS
1010 CARONOELET-SUITE 1
KANSAS CITY, MO 64114
VILLANUEVA, ANGELA A PTH
ST. JOSEPH HOSP
1000 CARONDELET DR.
KANSAS CITY, MO 64114
VINCENT, JACK C IM
2003 W. 67TH TERRACE
SHAWNEE MISSION, KS 66208
VIRIL, LEONARDO C GE
4706 BROADWAY
KANSAS CITY, MO 64112
VOGEL, ARTHUR P AN
2215 DRURY LANE
SHAWNEE MISSION, KS 66208
VOLK, GEO E OBG
4320 WORNALL RO
KANSAS CITY, MO 64111
VON LINTEL, THOMAS AN
ST. LUKE'S HOSP.
44TH AND WORNALL RD.
KANSAS CITY, MO 64111
VOTH, HAROLD W IM
4320 WORNALL RD
KANSAS CITY, MO 64111
WADDELL, THOMAS H DR
710 MEDICAL PLAZA
4320 WORNALL RD
KANSAS CITY, MO 64111
WADE, FREDERICK E OPH
PROFESSIONAL BLDG
1103 GRAND AVE
KANSAS CITY, MO 64106
WAECKERLE, JOSEPH F OS
TRUMAN MEO CENTER
2301 HOLMES
KANSAS CITY, MO 64108
WAGNER, PAUL J AN
GREENWILLOW FARM RT 1
GREENWOOD, MO 64034
WAKEFIELD, FRANKLIN H GP
13065 100TH OR
SUN CITY, AZ 85351
WALDMAN, RICHARD A PD
24TH & GILLHAM RD
KANSAS CITY, MO 64108
WALKER, JAMES C GP
609 E 96TH ST
KANSAS CITY, MO 64131
WALKER, ORVILLE C PD
1515 W TRUMAN RD
INOEPENDENCE, MO 64050
WALL, HARRY C A
751 E 6ORD ST STE 250
KANSAS CITY, MO 64110
WALL, LEONARD A OBG
5011 NEOSHO
SHAWNEE MISSION, KS 66205
WALLY, JOHN W US
4320 WORNALL RD-STE 508
KANSAS CITY, MO 64111
*WASSERMAN, GARY S PD
CHILDRENS MERCY HOSP OE
24TH & GILLHAM RD
KANSAS CITY, MO 64108
WATERS, JEFFREY A PD
206 BROADWAY MEDICAL BL
4400 BROADWAY
KANSAS CITY, MO 64111
WATHANA-CHAROEN, SUCHINT TS
4320 WORNALL RD
KANSAS CITY, MO 64111
WAXMAN, HERBERT J IM
8300 TROOST AVE THE MED
KANSAS CITY, MO 64131
WAXMAN, JANE Z PD
5800 MISSION OR
SHAWNEE MISSION, KS 66208
WEBB, HARRY E PS
4400 BROADWAY
KANSAS CITY, MO 64111
WEIFORD, EDWARD C NS
4320 WORNALL RD
KANSAS CITY, MO 64111
WEINSTEIN, CHAS L N
4440 BROADWAY
KANSAS CITY, MO 64111
WEIR, ROBT K OPH
610 BLUE RIDGE TOWER
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
WEISMAN, EDWARD B P
600 E 22NO ST
WESTERN MO MTL HLT CTR
KANSAS CITY, MO 64108
WELLS, DONALD E IM
MEYER BLVD AT PROSPECT
KANSAS CITY, MO 64132
WELLS, JAMES A AN
1008 VALENTINE RD
KANSAS CITY, MO 64111
WELLS, JOHN H IM
3325 PROSPECT AVE
KANSAS CITY, MO 64128
WELLS, STANLEY D DR
216 RES'RCH MED OFF BLD
6400 PROSPECT
KANSAS CITY, MO 64132
WENNER, HERBERT A PD
CHILDRENS MERCY HOSP
24TH & GILLHAM RD
KANSAS CITY, MO 64108
WEST, HAROLD D ORS
1515 W TRUMAN RO
INDEPENDENCE, MO 64050
WHEELER, CHAS B PH
4320 WORNALL RD
KANSAS CITY, MO 64111
WHITAKER, JAMES H OR
6400 PROSPECT
KANSAS CITY, MO 64132
WHITE, CHAS H AN
6518 OVERHILL RD
SHAWNEE MISSION, KS 66208
WHITE, JAMES S U
751 E 63RD ST
KANSAS CITY, MO 64110
WHITE, STOUGHTON F U
4320 WORNALL RD
KANSAS CITY, MO 64111
WHITE, WM E R
6400 PROSPECT
KANSAS CITY, MO 64132
WHITMAN, DANIEL S IM
GEO. WASHINGTON UNIV. HEALTH
1229 25TH ST. N.W.
WASHINNGTON, DC 20037
WHITMAN, DOYLE C OM
6836 CHEROKEE LANE
SHAWNEE MISSION, KS 66208
WHITMORE, J S R
2929 BALTIMORE
KANSAS CITY, MO 64108
WHITTAKER, CHAS K NS
4440 BROADWAY
KANSAS CITY, MO 64111
WIEN, IRVING A GS
1103 GRAND
KANSAS CITY, MO 64106
WILBER, ROBT O GE
4320 WORNALL RD STE 208
KANSAS CITY, MO 64111
WILHELM, WARREN F IM
6400 PROSPECT ST SUITE
KANSAS CITY, MO 64132
WILKINS, MICHAEL S IM
825 EUCLID
KANSAS CITY, MO 64124
WILKINSON, CHAS B P
2200 MC COY
KANSAS CITY, MO 64108
WILKINSON, EVERETT A GS
228 RESEARCH MED OFF BL
6400 PROSPECT
KANSAS CITY, MO 64132
WILLIAMS, FENTON A R
1734 E 63RD ST
KANSAS CITY, MO 64110
WILLIAMS, FRANK R OR
4320 WORNALL RD
KANSAS CITY, MO 64111
WILLIAMS, GEO P GP
10928 HILLCREST RO
KANSAS CITY, MO 64134
WILLIAMS, JOS C OB
6400 PROSPECT AVE
KANSAS CITY, MO 64132
WILLIAMS, ROLAND D OT
1010 CARONDELET OR.
SUITE 224
KANSAS CITY, MO 64114
WILLIAMS, STARKS J PD
2701 E 31ST ST
KANSAS CITY, MO 64128
WILLIAMS, THOMAS A P
6601 ROCKHILL RD
KANSAS CITY, MO 64131
WILLOUGHBY, JAMES W A
1125 GRAND AVE
KANSAS CITY, MO 64106
WILLOUGHBY, JEAN B IM
6400 PROSPECT
KANSAS CITY, MO 64132
WILSON, CLIFFORD C CR
1129 LEISURE LANE #8
WALNUT CREEK, CA 94595
WILSON, ROGER W OR
500 PENN PARK
2929 BALTIMORE
KANSAS CITY, MO 64108
WINER, HERBERT J OB
6724 TROOST STE 210
KANSAS CITY, MO 64131
WINER, NATHANIEL IM
2301 HOLMES
TRUMAN MEDICAL CENTE
KANSAS CITY, MO 64108
WINKELMAN, ESTHER B GP
6400 PROSPECT SUITE 224
KANSAS CITY, MO 64132
WINSTON, BERNARD H D
601 E 63RD ST
KANSAS CITY, MO 64110
WISE, GEO W PD
24TH & GILLHAM RD
KANSAS CITY, MO 64108
WISE, MORRIS F
6724 TROOST SUITE
KANSAS CITY, MO 64131
WITHERS, ORVAL R A
114 CYPRESS ST
LEE'S SUMMIT, MO 64063
WOEHL, JOS J N
4320 WORNALL RD NO 620
KANSAS CITY, MO 64111

---

* Doctor of Osteopathy

DLF, JACK W IM
6724 TROOST AVE STE 500
KANSAS CITY, MO 64131
OOD, DAVID G DR
340 PENN PARK
2929 BALTIMORE
KANSAS CITY, MO 64108
OODS, HAROLD V GP
917 MC GEE
KANSAS CITY, MO 64106
DODS, SAML D GS
4320 WORNALL RD RM 216
KANSAS CITY, MO 64111
OODS, WALTON C OM
TWA OVERHAUL BASE
P O BOX 20126
KANSAS CITY, MO 64195
OODWARD, WM W IM
4240 BLUE RIDGE BLVD
KANSAS CITY, MO 64133
ORTMANN, ROBT F OBG
2819 W 66TH TERR
SHAWNEE MISSION, KS 66208
RIGHT, R P IM
6700 TROOST ST-STE 40
KANSAS CITY, MO 64131
U, SHUH-MIN IM
6724 TROOST AVE STE 500
KANSAS CITY, MO 64131
U, WM Q NS
6700 TROOST
KANSAS CITY, MO 64131
URSTER, JERRY B OPH
4320 WORNALL RD
KANSAS CITY, MO 64111
URSTER, W J OTO
1010 CARONDELET DR.
SUITE 224
KANSAS CITY, MO 64114
OULI, DONALD V A
6700 TROOST
KANSAS CITY, MO 64131
OUMANS, RONALD A N
415 E 63RD ST
KANSAS CITY, MO 64110
OUNG, JAMES E P
4320 WORNALL RD STE 716
KANSAS CITY, MO 64111
OUNG, JESSE W GP
1401 SOUTHWEST BLVD
KANSAS CITY, KS 66103
OUNGBLOOD, JAMES P OBG
1010 CARONDELET DR
KANSAS CITY, MO 64114
U, MARIO K N
SUITE 117
4706 BROADWAY
KANSAS CITY, MO 64112
AHDNY, IVAN AN
4404 W 111TH TERR
SHAWNEE MISSION, KS 66211
AHORSKY, CARROLL L PS
SUITE 115
4706 BROADWAY
KANSAS CITY, MO 64112
ELLER, DARRELL E OBG
328 ST JOSEPH MED BLDG
1010 CARONDELET DR
KANSAS CITY, MO 64114
ERR, CHARLES H IM
4116 S SPRING
INDEPENDENCE, MO 64055
IA, MUHAMMAD S P
W. MO. MENTAL HLTH CTR.
6D0 E. 22ND ST.
KANSAS CITY, MO 64108
IEMIANSKI, MATTHEW C OPH
110 ROCKHILL MEDICAL BL
6700 TROOST
KANSAS CITY, MO 64131
OLLER, DAVID D PTH
101 MEMORIAL DR
KANSAS CITY, MO 64108
UKAITIS, MARK G AN
142 RESEARCH MED. OFF. 8LDG.
6400 PROSPECT
KANSAS CITY, MO 64132
WERENZ, 8RUNO H P
1734 EAST 63RD STREET
KANSAS CITY, MO 64110

102—JASPER

DAMS, ROBT B IM
3103 MC CLELLAND
JOPLIN, MO 64801
L-SHATHIR, SAA M PM
BRADY BUILDING
ST JOHNS MED CEN
JOPLIN, MO 64801
LLEN, DAVID O U
3105 MC CLELLAND BLVD
JOPLIN, MO 64801
RNOLD, JAMES T US
MEDICAL ARTS BLDG
JOPLIN, MO 64801
ENTLAGE, CHAS H US
1513 W 32ND ST-HILLSIDE
JOPLIN, MO 64801
BHEND, DAVID P P
3115 MC CLELLAND BLVD
JOPLIN, MO 64801
BIRD, WM J U
2727 MC CLELLAND BLVD
JOPLIN, MO 64801
BIRSNER, FRANK H GP
2401 JACKSON ST
JOPLIN, MO 64801
BLADOW, TERRENCE C PD
3107 MC CLELLAND BLVD
JOPLIN, MO 64801
BOPP, JON R OBG
3115 MC CLELLAND BLVD
JOPLIN, MO 64801
BORELLO, DAN J OBG
3115 MCCLELLAND BLVD.
JOPLIN, MO 64801
BRANDON, FREDERICK M R
1102 W 32ND ST
JOPLIN, MO 64801
BROWNING, RONALD A IM
3402 MCINTOSH CIRCLE DR.
JOPLIN, MO 64801
BURCH, JOHN E OBG
P O BOX 2247
JOPLIN, MO 64801
BURLEIGH, BRUCE W ORS
2700 MC CLELLAND BLVD
JOPLIN, MO 64801
CARNES, VICTOR M PTH
P O BOX B MAIN OFFICE
JOPLIN, MO 64801
CHASE, NED B ORS
2700 MC CLELLAND BLVD
JOPLIN, MO 64801
CHELLAPPA, DANUKODI GE
2727 MC CLELLAND BLVD
JOPLIN, MO 64801
CHESNEY, GEO W AN
2604 PICHER ST
JOPLIN, MO 64801
CLARK, FRANK I PD
3107 MC CLELLAND BLVD
JOPLIN, MO 64801
COHLE, RICHARD R IM
301 E CHESTNUT ST
CARTHAGE, MO 64836
CONDE, GARY A FP
2509 JACKSON
JOPLIN, MO 64801
CRAIG, IRWIN T OBG
2039 GULF OF MEXICO DR
LONGBOAT KEY, FL 33548
CRAWFORD, ARCHIE L GS
607 MAIN ST
JOPLIN, MO 64801
CRISPELL, LAWRENCE S OTO
2000 CENTER BLDG-20TH C
JOPLIN, MO 64801
DANDRIDGE, WALTER C A GS
2601 CUNNINGHAM
JOPLIN, MO 64801
DAVIS, CHAS S US
301 MED ARTS BLDG
JOPLIN, MO 64801
DE TAR, BURLEIGH E GS
410 JACKSON AVE
JOPLIN, MO 64801
DIXON, HERBERT K OPH
1416 JOPLIN ST
JOPLIN, MO 64801
ELISCU, JULIETTE M PD
3107 MC CLELLAND
JOPLIN, MO 64801
ESTHER, JOHN R PTH
FERGUSONS LAB BOX B
JOPLIN, MO 64B01
FERGUSON, ROBT M GP
510 E 32ND
JOPLIN, MO 64801
FRITSCH, ANDREW J IM
2525 JACKSON ST
JOPLIN, MO 64801
FROGGE, JIMMY D U
3105 MC CELLAND BLVD
JOPLIN, MO 64801
GARDNER, JOS A OBG
3101 MC CLELLAND BLVD
JOPLIN, MO 64801
GASTON, SAML L R
2720 OHIO
JOPLIN, MO 64801
GREBE, T K OBG
3209 MC CLELLAND
JOPLIN, MO 64801
GRIM, EDWARD M U
3105 MC CLELLAND BLVD
JOPLIN, MO 64801
GRUBB, PAUL H GP
2509 JACKSON
JOPLIN, MO 64801
HABERMANN, JAMES H PTH
1102 W 32ND
JOPLIN, MO 64801
HALL, MARVIN F R
3115 MC CLELLAND
JOPLIN, MO 64801
HALLA8A, MOHEB A GS
2601 CUNNINGHAM
JOPLIN, MO 64801
HILTON, PAUL E D
1612 MURPHY BLVD
JOPLIN, MO 64801
HOLTZMAN, SAML D
3001 MARTIN L KING DR A
CHICAGO, IL 60616
HURST, WILFRED W ORS
3115 MC CLELLAND
JOPLIN, MO 64801
HWANG, YUNG H GS
121 COLLEGE
WEBB CITY, MO 64870
JEANS, VIRGIL E OM
660 JACCARD PL
JOPLIN, MO 64801
KIRKMAN, ROBERT E OTO
3661 S. MIAMI AVE.
310 MERCY PROF BLDG.
MIAMI, FL 33133
KOEHLER, JOHN W IM
3103 MC CLELLAND BLVD
JOPLIN, MO 64801
KUHN, JOHN R GP
321 FRISCO BLDG
JOPLIN, MO 648D1
LONGENECKER, JOE L US
2503 JACKSON AVE
JOPLIN, MO 64801
MAC LAUGHLIN, JAMES C IM
3103 MC CLELLAND BLVD
JOPLIN, MO 64801
MAJZOUB, HISHAM S NS
2902 MC CLELLAND
JOPLIN, MO 64801
MANALO, GIL B GS
510 S GARRISON
CARTHAGE, MO 64836
MANGALAT, NARAYANAN K NEP
25 JACKSON AVE
MEDICAL ARTS BLDG
JOPLIN, MO 64801
MARTIN, CLARENCE A GS
1513 W 32ND
JOPLIN, MO 64801
MC GONIGLE, JAMES P OPH
2730 CUNNINGHAM
JOPLIN, MO 64801
MC GONIGLE, MICHAEL M GP
2620 CUNNINGHAM
JOPLIN, MO 64801
MC PIKE, LLOYD H GS
2217 BROWNELL ST
JOPLIN, MO 64801
MEREDITH, WILLIAM R JR. OPH
2727 MCCLELLAND BLVD
JOPLIN, MO 64801
MUELLER, ADOLPH R ORS
2700 MC CLELLAND BLVD
JOPLIN, MO 64801
PADDOCK, CHAS S U
3905 RANGE LINE RD
JOPLIN, MO 64801
PATTERSON, DONALD R GP
2509 JACKSON ST
JOPLIN, MO 64801
PATTERSON, GROVER S GP
510 S MAIN ST
CARTHAGE, MO 64836
PENCE, FRANCIS W GP
2727 MC CLELLAND BLVD
JOPLIN, MO 64801
POOR, CARL W OS
411 JOY ST
NEOSHO, MO 64850
POTTENGER, LOWELL K DR
107 MEDICAL ARTS BLDG
JOPLIN, MO 64801
POWELL, ROBT G IM
2329 JACKSON
JOPLIN, MO 64801
PRYOR, IRA J AN
2902 MCCLELLAND BLVD.
SUITE 5
JOPLIN, MO 64801
RAY, DAVID J U
1031 MC INTOSH CIRCLE D
JOPLIN, MO 64801
ROBERTS, HOWARD H OBG
3101 MC CLELLAND
JOPLIN, MO 64801
ROYCE, JAMES J GP
16TH MINER STS
SARCOXIE, MO 64862
SABAPATHY, SHANMUGASUNDARA CD
MEDICAL ARTS BLDG ROOM
JOPLIN, MO 64801
SANEMAN, PAUL P OBG
2700 MC CLELLAND BLVD
JOPLIN, MO 64801
SCHMIDT, HERBERT J OBG
3702 W 26TH
JOPLIN, MO 64801
SCHOEBERL, CLETUS B IM
305 MED ARTS BLDG
JOPLIN, MO 64801

SCHULTE, GREGORY A 2125 JACKSON AVE JOPLIN, MO 64801	GP
SCORSE, SIDNEY W R R I-BOX 236 NEOSHO, MO 64850	OS
SHANAHAN, MARY P P O BOX 2125 JOPLIN, MO 64801	OBG
SIMMONS, JESS S 2700 MC CLELLAND BLVD JOPLIN, MO 64801	D
SINGLETON, MARVIN A 114 W 32ND ST JOPLIN, MO 64801	OTO
SMITH, ROLAND T 207 MEDICAL ARTS BLDG JOPLIN, MO 64801	GS
SMITH, W R 211 E CHESTNUT ST CARTHAGE, MO 64836	GS
STIDMAN, FREDERICK C 3107 MC CLELLAND BLVD JOPLIN, MO 64801	PD
STRAUB, DAVID L 3107 MC CLELLAND JOPLIN, MO 64801	AI
TURFBOER, ROBERT 2701 WEST 32ND ST. JOPLIN, MO 64801	P
VINYARD, JACK L 2727 MC CALLAND BLVD JOPLIN, MO 64801	GP
WALKER, PAUL W 1022 N SERGEANT JOPLIN, MO 64801	U
WHITTEN, M F 616 W CENTENNIAL ST CARTHAGE, MO 64836	GP
WIEMAN, HARRY K 206 MED ARTS BLDG JOPLIN, MO 64801	IM
WILCOX, RUTH E 614 JOPLIN ST JOPLIN, MO 64801	PD
WILLCOXON, ROBT L 2601 CUNNINGHAM JOPLIN, MO 64801	GS
WILSON, ALICE H RTE 1 BOX 163 NEOSHO, MO 64850	OS
WOOD, GEO H 1515 HAZEL AVE CARTHAGE, MO 64836	GP
YOUNG, CALVIN C 3115 MC CLELLAND JOPLIN, MO 64801	R

106—JEFFERSON

ALBANO, BENJ I P O BOX 380 CRYSTAL CITY, MO 63019	GS
ALLBEE, ROGER H 121 B MISSIPPI CRYSTAL CITY, MO 63019	GS
BAI, SAMUEL S 107 WALNUT ST FESTUS, MO 63028	CD
BELEN, MARIETTA COUNTY-WIDE PEDIATRICS, INC. 103 NORTH MILL ST. FESTUS, MO 63028	PD
BLANK, MICHAEL K 111 EASTON ST DE SOTO, MO 63020	GS
BONIFACIO, ANDRES S 121 MISSISSIPPI CRYSTAL CITY, MO 63019	OBG
CARRON, JOSEPH 1606 HOBELMANN ARNOLD, MO 63010	GP
CARSON, RICKEY R P O. BOX 187 YELLVILLE, AR 72687	FP
CHARLES, NALLATHAMBI MEDICAL VILLAGE FESTUS, MO 63028	GP
CHARLES, PADMINI MEDICAL VILLAGE RT #4 FESTUS, MO 63028	GP
CONANT, JAMES F 111 EASTON ST DE SOTO, MO 63020	GP
DELES, VICENTE D MEDICAL VILLAGE CRYSTAL CITY, MO 63019	GS
DONNELL, HAROLD E 700 N MAIN DE SOTO, MO 63020	GP
DONNELL, ROBT H 112 MISSISSIPPI CRYSTAL CITY, MO 63019	OR
DONNELL, THOS A P O BOX 592 HILLSBORO, MO 63050	GP
EDWARDS, WALDO B 135 W ADAMS KIRKWOOD, MO 63122	OBG
JUDGE, WALTER T 1004 TAYLOR AVE CRYSTAL CITY, MO 63019	OS
LEE, JUNG H P O BOX 309 CRYSTAL CITY, MO 63019	CD
PARK, DUK J 105 WALNUT ST FESTUS, MO 63028	IM
PARK, KUN H 303 MAIN ST FESTUS, MO 63028	OBG
REED, MARTHA A JEFFERSON SQUARE SHOPPI DE SOTO, MO 63020	IM
RUTLEDGE, JOHN F MANNS BLDG FESTUS, MO 63028	GP
SIRINTRAPUN, SEYVEE 1515 SWEENEY DR FESTUS, MO 63028	OBG
UMALI-SESSOMS, NORA C HWY 61 CRYSTAL CITY, MO 63019	AN
UMALI-SESSONS, NORA C P.O. BOX 8 BARNHART, MO 63012	P
VERZOLA, EUFEMIO G 11 MAIN ST HERCULANEUM, MO 63048	GS
YOSKIT, HARRY C/O HERMAN GUZOFEKY 90-50 UNION TURNPIKE GLENDALE, NY 11227	O

110—JOHNSON

COOPER, ROBT L 602 N MC GUIRE WARRENSBURG, MO 64093	GP
COOPER, ROBT L P O BOX 458 WARRENSBURG, MO 64093	OBG
DAMRON, OSCAR H 308 JONES ST WARRENSBURG, MO 64093	GP
FOLKNER, ALBERT L 222 E CULTON ST WARRENSBURG, MO 64093	GP
GONZALEZ, MARIO G JOHNSON CO MEM HOSP WARRENSBURG, MO 64093	R
GROVE, GULPH W 210 E MC PHERSON KNOB NOSTER, MO 65336	GP
HANNA, HUGH A ROUTE 7 SOUTH MITCHELL ST. WARRENSBURG, MO 64093	GS
HOBBS, GEO H 1151 N SHORE DR SAN BENITO, TX 78586	IM
JOHNSON, CHAS S 114 E MARKET ST WARRENSBURG, MO 64093	IM
JONES, KEITH D 122 E MARKET ST WARRENSBURG, MO 64093	GP
LEDERER, CHAS M 122 E MARKET ST WARRENSBURG, MO 64093	GP
MAXSON, THEODORE R 220 E CULTON WARRENSBURG, MO 64093	GP
RAGLAND, JERRY J BOX 516 WARRENSBURG, MO 64093	GS
REYNOLDS, M W P O BOX 86 WARRENSBURG, MO 64093	OPH
SICAT, ALFONSO V 510 E GAY WARRENSBURG, MO 64093	ORS

115—LACLEDE

BEALER, LOUIS A 732 S MADISON LEBANON, MO 65536	GS
CARRINGTON, HOWARD W P. O. BOX 1142 LEBANON, MO 65536	GP
CASTER, PHILIP W P. O. BOX 1142 LEBANON, MO 65536	GP
*COURTER, GARY M P. O. BOX 1142 LEBANON, MO 65536	GP
FROELICH, RAE W 1345 W MADISON LEBANON, MO 65536	GP
GAPASIN, ERNESTO M 201 W COMMERCIAL LEBANON, MO 65536	GS
HITE, DENNIS E P. O. BOX 1142 LEBANON, MO 65536	GP
SHERMAN, PHILIP A P. O. BOX 1142 LEBANON, MO 65536	U

118—LAFAYETTE-RAY

BALDWIN, THEODORE R 1236 JESSE JAMES RD EXCELSIOR SPRIN, MO 64024	G
BEST, ROBT B 4300 W 111TH TER SHAWNEE MISSION, KS 66211	E
BOYDSTON, CATHERINE O 107 S 2ND ST ODESSA, MO 64076	G
BOYDSTON, WYATT W 107 E 2ND ST ODESSA, MO 64076	G
BRADY, HUGH S RR 1 CONCORDIA, MO 64020	O
COOK, THOS B 802 E MAIN ST RICHMOND, MO 64085	G
COPE, JOS S 1110 1/2 MAIN STREET LEXINGTON, MO 64067	GS
CRAYTON, BILLY G BOX 41 WAVERLY, MO 64096	G
CROZIER, FRANKLIN A 201 S COLLEGE AVE RICHMOND CLINIC RICHMOND, MO 64085	G
DAVAULT, GEO K MEDICAL CENTER RICHMOND, MO 64085	G
DE MOTTE, JEANNE M HWY 13 SOUTH P O BOX 68 RICHMOND, MO 64085	G
GEORGE, THEODORE P O BOX 512 RICHMOND, MO 64085	GS
KELLING, JORDAN A KELLING CLINIC-HOSP WAVERLY, MO 64096	GP
KUANGPARICHAT, MANOCH RT 1 BOX 165B LEXINGTON, MO 64067	I
LA HUE, WILLIAM C 1901 SLEEPY HOLLOW DR LEXINGTON, MO 64067	GS
LAI, HSIEN-ELL 15TH AND STATE STS LEXINGTON, MO 64067	GP
MC FADDEN, GENE A KELLING CLINIC WAVERLY, MO 64096	GP
MEYER, JERRY L 834 MAIN ST CONCORDIA, MO 64020	GP
PAVLU, ROBT R KELLING CLINIC HOSP WAVERLY, MO 64096	GP
RILEY, CHAS T BOX 68 RICHMOND, MO 64085	GP
VAJARANANT, MANIT R 1 BOX 164 MEDICAL CLINIC LEXINGTON, MO 64067	OB
WARD, JOE W 1028 1/2 MAIN ST LEXINGTON, MO 64067	GP
WILLIAMS, JOHN W 801 W 15TH OAK GROVE, MO 64075	OM

120—LAKE OF THE OZARKS

BUEHLER, CARL T 6 S MAPLE ST ELDON, MO 65026	GP
FOTOPOULOS, CHRIS K P O BOX 128 OSAGE BEACH, MO 65065	GS
GARRISON, THEODORE W P O BOX 356 CAMDENTON, MO 65020	GP
GUNN, JACK P. O. BOX 160 VERSAILLES, MO 65084	GP
HALL, CHAS R P. O. BOX 160 VERSAILLES, MO 65084	GP
HAYOEN, MELVIN R P. O. BOX 789 CAMDENTON, MO 65020	GP
HOLLEY, DONALD B P. O. BOX 789 CAMDENTON, MO 65020	GP
KAUFFMAN, RUTH P. O. BOX 160 VERSAILLES, MO 65084	GP
LYLE, ROBT R P. O. BOX 160 VERSAILLES, MO 65084	GP
MOSELEY, OTIS O BOX 248 OSAGE BEACH, MO 65065	GP

---

* Doctor of Osteopathy

HELTON, EDWARD O GP
104 W NEWTON
ELDON, MO 65026
HARP, JUOITH L OS
RT1 BOX 271-H
CAMOENTON, MO 65020
IETJEN, FREO O ORS
P. O. BOX 187
DSAGE BEACH, MO 65065
ANDIVER, VIRGIL D AN
P. O. BOX 248
OSAGE BEACH, MO 65065
ASHBURN, JOHN L GP
BOX 109 BANK BLDG
VERSAILLES, MO 65084

22—LEWIS-CLARK-SCOTLAND

AVIS, LANDIS Y GP
5TH & CLARK STS
CANTON, MO 63435

26—ST. CHARLES-LINCOLN

LTMAN, MARTIN P GE
2850 W CLAY ST
ST CHARLES, MO 63301
LUL, MOHAMMAD-ALI H PD
1650 BOONSLICK
ST CHARLES, MO 63301
GWE, RANJIT M CD
1301 BOONSLICK
ST CHARLES, MO 63301
IRO, KEIM L P
2860 W CLAY ST
ST CHARLES, MO 63301
BRERA, TOMAS V GP
79 COTTLEVILLE
ST PETERS, MO 63376
NTY, EUGENE J IM
114 N MAIN ST
ST CHARLES, MO 63301
RPENTER, JAMES L U
2 WESTBURY ROOM 6
ST CHARLES, MO 63301
EVER, HENRY W PD
1301 BOONSLICK RO
ST CHARLES, MO 63301
EVER, VICTOR G OPH
120 FIRST CAPITOL OR
ST CHARLES, MO 63301
MMERFORD, JOHN F GP
1301 BOONSLICK RO
ST CHARLES, MO 63301
NNELLY, MICHAEL W OPH
#18 HUNTLEIGH DOWNS
ST LDUIS, MO 63131
VA, RENO R NS
12255 DE PAUL DRIVE SUI
BRIDGETON, MO 63044
EECH, JOSEPH C GP
TRDY, MO 63379
RRY, MICHAEL J IM
2850 W CLAY ST
ST CHARLES, MO 63301
MRON, EDWARD O GP
309 GRIFFIN ST
ELSBERRY, MO 63343
VIS, MARLOU GP
302 SOUTH 2NO
ST CHARLES, MO 63301
L PIZZO, FERDINAND OBG
1301 BOONSLICK
ST CHARLES, MO 63301
SAI, RAVINDRA S OTO
1650 BOONSLICK RO
ST CHARLES, MO 63301
FILIPPO, EMIL A ORS
110 S KINGSHIGHWAY
ST CHARLES, MO 63301
ETERICH, RUSSELL OBG
1301 8OONSLICK
ST CHARLES, MO 63301
MONTIER, RENE J GP
P. O. BOX 8
203 CHURCH ST.
O'FALLON, MO 63366
LING, GERALO J PO
ST JOSEPH HOSPITAL
THIRO ST & FIRST CAP
ST CHARLES, MO 63301
NCAN, OAVIO T OBG
2 WESTBURY DR
ST CHARLES, MO 63301
LOER, JAMES P GS
208 S 5TH
ST CHARLES, MO 63301
EMING, ROBT J OPH
120 FIRST CAPITOL OR
ST CHARLES, MO 63301
LDKAMP, JOHN O PO
2 WESTBURY
ST CHARLES, MO 63301
RE, GLENN L OBG
1650 BUONSLICK RO
ST CHARLES, MO 63301

HAMMES, ROMAN E PD
100D LAKE ST LOUIS BLVD
LAKE SAINT LOUI, MO 63367
HETLAGE, LOUIS P GS
1004 E CHERRY ST
TROY, MO 63379
IRICK, MAX L GE
1301 BOONSLICK
ST CHARLES, MO 63301
KAMADA, TSUTOMU GS
1001 HWY K SUITE 2
O'FALLON MEO. CTR.
O'FALLON, MO 63366
KEEFE, OAVID M PD
#2 WESTBURY ORIVE
ST CHARLES, MO 63301
KELLER, ROBT M GP
704 W PEARCE BLVD
WENTZVILLE, MO 63385
KEOHANE, MARK ORS
#7 WINORUSH CREEK E
CREVE COEUR, MO 63141
KINGSBURY, ROBT J GS
222 S 2NO ST
ST CHARLES, MO 63301
KISTER, GEO E GP
236 THOMAS ST
ST CHARLES, MO 63301
LINSENMEYER, CHARLES M ORS
110 S KINGSHIGHWAY
ST CHARLES, MO 63301
MEYERS, JERRY R GS
222 SOUTH SECOND ST
ST CHARLES, MO 63301
MILES, WAYNE B A
2850 W CLAY
ST CHARLES, MO 63301
MUENSTER, VINCENT P GS
2850 W CLAY ST
ST CHARLES, MO 63301
MUHM, HARVARO Y GS
1301 BOONSLICK
ST CHARLES, MO 63301
NEUBEISER, BEN L GS
1628 NE 6TH CT
FORT LAUOEROALE, FL 33301
OBANOO, FRANCISCO J GP
TROY, MO 63379
OLSON, RICHARD O GS
2850 W CLAY ST
ST CHARLES, MO 63301
OROOUKHANIAN, TATOOL A PO
1621 HERITAGE LANDING
ST CHARLES, MO 63301
PERNA, VINCENT P PTH
11636 ADMINISTRATOR DR
CREVE COEUR, MO 63141
POGGEMEIER, WM H GP
304 S 2ND ST
ST CHARLES, MO 63301
RAHMAN, MOHAMMED H PD
1617 MEWS DR.
KANSAS CITY, MO 64131
REISA, RONALO C OBG
2 WESTBURY
ST CHARLES, MO 63301
ROTER, ALEXANDER M OBG
2 WESTBURY OR
ST CHARLES, MO 63301
ROTHER, PAUL H IM
1301 BOONSLICK RD
ST CHARLES, MO 63301
ROXAS, GENEROSO P IM
2 WESBURY DR.
ST. CHARLES, MO 63301
RUGGLES, JAMES G PTH
11636 ADMINISTRATION OR
CREVE COEUR, MO 63141
SCHNEIDER, THOS A GS
2850 W CLAY
ST CHARLES, MO 63301
SCHUETZ, ALFRED IM
1301 BOONSLICK
ST CHARLES, MO 63301
*SILL, WILLIAM FP
235 SHELBURNE OR
ST CHARLES, MO 63301
SMOLLER, MARTIN B IM
14 COLONIAL HILL PKWY
ST LOUIS, MO 63141
SOUCY, JOHN C IM
2850 W CLAY ST
ST CHARLES, MO 63301
STEIMAN, BARRY OBG
11636 CHIEFTAIN
CREVE COEUR, MO 63141
STILL, NOAH L IM
1301 BOONSLICK
ST CHARLES, MO 63301
STUFFLEBAM, BRIAN W IM
2850 WEST CLAY ST
ST CHARLES, MO 63301
SUAREZ-SOLAR, PEORO L P
1360 S 5TH ST SUITE 270
ST CHARLES, MO 63301
TASSI, ALBERT A GS
601 INOIAN HILLS
ST CHARLES, MO 63301

TEJERO, JONAS S IM
547 FIRST CAPITOL DR
ST CHARLES, MO 63301
THIELE, OTTO K GS
2 WESTBURY
ST CHARLES, MO 63301
UHLEMANN, JOHN H O
1301 BOONSLICK
ST CHARLES, MO 63301
VAFI, HOUSHANG P
10004 KENNERLY RD
SUITE 215
ST LOUIS, MO 63128
VART, GARY R OBG
1650 BOONSLICK
ST CHARLES, MO 63301
VIGHI, JAMES R OTO
2850 W CLAY
ST CHARLES, MO 63301
WALSH, MARTIN J IM
#8 MILL RACE CT
ST PETERS, MO 63376
WESTERFELD, ROY A PD
1301 BOONSLICK
ST CHARLES, MO 63301
WIPFLER, EARL J GS
222 S SECONO
ST CHARLES, MO 63301
YAEGER, GERALD A GP
2444 W CLAY ST
ST CHARLES, MO 63301

130—MARION-RALLS-SHELBY

AVILA, ESTRELLA Z IM
110 MAGNOLIA AVE
HANNIBAL, MO 63401
AVILA, PATRICIO C GP
110 MAGNOLIA AVE
HANNIBAL, MO 63401
BACH, LYSLE M R
4209 W ELY RD
HANNIBAL, MO 63401
BELL, ROBT M P
109 VIRGINIA
HANNIBAL, MO 63401
BORROMEO, CARLOS J PD
603 COUNTRY CLUB DR
HANNIBAL, MO 63401
BUBEN, ROBT W GS
2910 ST MARYS AVE
HANNIBAL, MO 63401
BUKSTEIN, MICHAEL J GS
711 GRANO AVE
HANNIBAL, MO 63401
BURNS, FRANCIS R OBG
TOWER PLAZA
CLINIC RO
HANNIBAL, MO 63401
BURTON, OALE F GS
P O BOX 311
HANNIBAL, MO 63401
CLISHAM, JOHN F U
B AND L BLDG
HANNIBAL, MO 63401
COMER, JULIAN R DR
RFD 2
NEW LONDON, MO 63459
FLORENDO, FEOERICO N PTH
LEVERING HOSP
HANNIBAL, MO 63401
FLORENDO, PURIFICACION T OBG
TOWER PLAZA-CLINIC RD
HANNIBAL, MO 63401
FOREMAN, PHILLIP B GS
P O BOX 311
HANNIBAL, MO 63401
GREENE, HARRY L CO
109 B VIRGINIA
HANNIBAL, MO 63401
HALL, STANLEY G PTH
SYCAMORE SPRING
RFD #2
HANNIBAL, MO 63401
HAMLIN, WYETH IM
711 GRANO AVE
HANNIBAL, MO 63401
HINOS, ROY O AN
RT #3
HANNIBAL, MO 63401
JAYANANDAIAH, HIREMATHAOA P
4 BRIARWOOO
HANNIBAL, MO 63401
KRUSE, CARL R GP
706 S DICKERSON ST
PALMYRA, MO 63461
KWON, YONGSOO GS
2910 ST MARYS
HANNIBAL, MO 63401
LICHTY, CHAS A GP
SHELBINA, MO 63468
MANN, JAMES K PD
4074 HILLSIDE ORIVE
HANNIBAL, MO 63401
MURPHY, BERNARD L ORS
20D0 CRESCENT OR
HANNIBAL, MO 63401
PALMER, RUSSELL H GP
706 S DICKERSON ST
PALMYRA, MO 63461

---

octor of Osteopathy

PLOWMAN, EDWARD M OPH
B AND L BLDG
HANNIBAL, MO 63401
RAPP, EARL L GP
BOX 311
HANNIBAL, MO 6340I
ROLLER, JAMES A D
2319 BROADWAY
HANNIBAL, MO 6340I
ROLLER, MERRILL J GP
2910 ST MARY'S AVE
HANNIBAL, MO 6340I
STEELE, JAMES C OBG
2802 MARSH AVE
HANNIBAL, MO 6340I
STRANGE, LESLIE C OTO
711 GRAND
HANNIBAL, MO 63401
WALTERSCHEID, JOHN H GP
I209 BROADWAY
HANNIBAL, MO 6340I
WELL, JULIUS W GP
1I1 E OLIVE ST
PALMYRA, MO 63461

138—MINERAL AREA
(St. Francois-Iron-Madison-Washington-Reynolds-Bollinger Counties)

APPLEBERRY, CHAS H P
43 ST. JOE ST.
FLAT RIVER, MO 63601
BENTINGANAN, VICTOR D GS
703 W MAIN STREET
FREDERICKTOWN, MO 63645
BHUTTA, HAROLD M GS
815 E MAIN ST
FLAT RIVER, MO 6360I
BOONYASAI, BOONFU GP
W MAPLE ST AT HIGHWAY 2
PILOT KNOB, MO 63663
CANCELADA, JUAN V OBG
NORTH STREET
FARMINGTON, MO 63640
CARLETON, CHAS E GP
MED ARTS CLINIC
FARMINGTON, MO 63640
CHASTAIN, CHAS W GP
FAMILY HEALTH CARE
BI5 E. MAIN ST.
FLAT RIVER, MO 63601
DATTA, NARENOAR K OBG
30 N ALLEN
BONNE TERRE, MO 6362B
DAVIS, THOMAS N P
STATE HOSPITAL
FARMINGTON, MO 63640
DENNIS, WM P GP
I000 N MAIN ST
DESLOGE, MO 6360I
DENT, GEORGE W OBG
301 W LIBERTY ST
FARMINGTON, MO 63640
DETTMER, ROBT F GP
128 W RUSSELL
IRONTON, MO 63650
DIERKER, HARRY D GP
30I W LIBERTY ST
FARMINGTON, MO 63640
FARMER, NORMA P P
709 WARREN ST
FARMINGTON, MO 63640
GRAY, WALTER C GP
30I W LIBERTY
FARMINGTON, MO 63640
HARDY, STANTON L GP
1000 N MAIN ST
DESLOGE, MO 6360I
HOCTOR, EMMETT F P
STATE HOSP NO 4
FARMINGTON, MO 63640
HUCKSTEP, ROBT A IM
30I W LIBERTY ST
FARMINGTON, MO 63640
KARRAKER, ALVAN G GP
301 W LIBERTY ST
MEDICAL ARTS CLINIC
FARMINGTON, MO 63640
KIM, LONGIUS H GS
AUSTIN PLAZA
POTOSI, MO 63664
MARDINI, EDWARD E GS
30 NORTH ALLEN
BONNE TERRE, MO 6362B
MENNE, MARVIN C GP
I09 N MAIN ST
IRONTON, MO 63650
MULLEN, JACK IM
30 N ALLEN ST
BONNE TERRE, MO 6362B
NEUKOM, GEO B P
324 E LOCKWOOD
ST LOUIS, MO 63119
NEWCOMB, ARTHUR D US
100B W I0TH ST
LAMAR, MO 64759
NICOLAY, WM R R
599 D WINDING CREEK RD
FAYETTEVILLE, NC 2B305
OLIVER, GEO A GS
MEDICAL ARTS CLINIC
FARMINGTON, MO 63640
PICHARDO, JAVIER A P
FARMINGTON STATE HOSP-R
FARMINGTON, MO 63640
RAKSAKULTHAI, VINAI OBG
703 W MAIN ST
FREDERICKTOWN, MO 63645
RAMAMOHANARAO, A CD
703 W MAIN ST
FREDERICKTOWN, MO 63645
SERMCHIEF, CHAIYARAT OBG
703 W MAIN
FREDERICKTOWN, MO 63645
SIMPELO, RUSTICO V GS
AUSTIN PLAZA
POTOSI, MO 63664
TAYLOR, VAN W GS
54 CHURCH ST
BONNE TERRE, MO 6362B
TUTTLE, JAY F P
42I HICKORY GLEN LANE
ST LOUIS, MO 63I4I
VIBULAKAOPUN, PAIRAT IM
30 N ALLEN ST
BONNE TERRE, MO 63628
WATKINS, GEO L GS
BOX I745
RANCHO SANTA FE, CA 92067

142—MONITEAU

FULKS, RICHARD B GP
BOX 4I0
CALIFORNIA, MO 65018
GALLAGHER, LIONEL M GP
102-A DAHLER ST
CALIFORNIA, MO 650I8
LATHAM, KENYON S GP
109 N HIGH
CALIFORNIA, MO 650I8

146—MONTGOMERY

BYLAND, SAML J GP
120 HUDSON ST
WELLSVILLE, MO 63384

158—NORTHWEST
(Nodaway-Holt-Atchison-Gentry-Worth Counties)

BARE, EDWARD F GP
I02 S 6TH
TARKIO, MO 64491
BAUMAN, HENRY C GP
929 WEST 3RD
MARYVILLE, MO 6446B
BYLAND, BENJ F GS
P O BOX C
MARYVILLE, MO 64468
CARLIN, ALBERT L GP
PARK AVE
STANBERRY, MO 644B9
CARPENTER, WALLACE OS
I00 CASS ST
ROCK PORT, MO 64482
CASTILLO, ISABELO US
SOUTH MAIN ST
MARYVILLE, MO 6446B
DEAN, WALTER E GP
HIGHWAY 7I SOUTH
MARYVILLE, MO 64468
DIZNEY, DESMION M GP
NW MO ST UNIV-COLBERT H
MARYVILLE, MO 6446B
DUNDEE, JOHN T R
ST FRANCIS HOSPITAL
MARYVILLE, MO 6446B
DUNSHEE, ROBT E GP
406 1/2 NORTH MAIN STRE
MARYVILLE, MO 64468
HARR, PATRICK B GP
HIGHWAY 71 S
MARYVILLE, MO 64468
HAVALDAR, KANTI L IM
HWY 7I SPO BOX C
MARYVILLE, MO 64468
HUMPHREY, JAMES D GP
MOUND CITY, MO 64470
IMES, ELVIN D GP
119 N MAIN ST
MARYVILLE, MO 64468
KHAN, M O DR
RFD 4
MARYVILLE, MO 64468
KURUVILLA, GEORGE GS
PHYSICIANS BLDG
MARYVILLE, MO 6446B
MATTESON, FRANK B US
2I W 3RD ST
GRANT CITY, MO 64456
NIEDERMEYER, EDWARD L GP
305 BROAD ST
TARKIO, MO 6449I
PARSONS, BERNIE GP
HIGHWAY I36
ALBANY, MO 64402
WANAMAKER, JOHN M GP
110 MILL ST W
ROCK PORT, MO 64482
WEMPE, GEO R GP
P O BOX C
MARYVILLE, MO 6446B

162—NORTH CENTRAL
(Adair-Schuyler-Knox-Sullivan-Putnam Counties)

ENGLISH, MILTON T ORS
2902 N BALTIMORE
KIRKSVILLE, MO 63501
TARVYDAS, FRANCIS US
EDINA, MO 63537

166—OZARKS
(Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald Counties)

ANDERSON, PAUL B GP
113 W HICKORY
NEOSHO, MO 64850
APOSTOL, ANDRES G GS
801 LINCOLN ST
MONETT, MO 65708
ARORA, NARINDER S IM
STATE CHEST HOSP.
MT. VERNON, MO 657I2
BARNES, LARRY G IM
I13 W HICKORY
NEOSHO, MO 64B50
BETZ, RICHARD J IM
SALE MEM HOSP
NEOSHO, MO 64850
BETZ, ROBERT F GS
113 WEST HICKORY
NEOSHO, MO 64B50
BIZEK, JOS L GS
500 A PORTER
AURORA, MO 65605
BLANKENSHIP, GEO W GP
ROUTE #6 BOX 3B5
NEOSHO, MO 64850
BOWMAN, MELVIN C GP
DRAWER I0
NEOSHO, MO 64850
BROWN, FREDERICK B GP
930 MC PHAIL DR
AURORA, MO 65605
CAMPBELL, DANIEL C TS
STATE CHEST HOSPITAL
MOUNT VERNON, MO 657I2
CARTER, JAMES R GS
1I3 W HICKORY ST
NEOSHO, MO 64850
CHRISTIANSON, CHAS S PUD
ROUTE 1
BOX 85
MOUNT VERNON, MO 657I2
CRAIN, JAMES W GS
HAMMERS BLDG
BRANSON, MO 656I6
CRUZ, SERGIO G IM
ST VINCENT HOSP
80I LINCOLN
MONETT, MO 65708
DABBS, WILBUR D GP
SALE MEM HOSP
NEOSHO, MO 64850
DATTA, JYOTI S PUD
MISSOURI STATE CHEST HO
COTTAGE #5
MOUNT VERNON, MO 65712
DONLEY, ROBT R GP
6I7 W CLEVE
MONETT, MO 65708
EDWARDS, FRANCIS L IM
CASSVILLE, MO 65625
ESPARRAGO, F R GS
801 LINCOLN
MONETT, MO 6570B
GALINSKY, LEON J PUD
164 PASEO CHUPAROSAS
GREEN VALLEY, AZ 856I4
GARDNER, JOS W GP
8 WALNUT LANE
KIMBERLING CITY, MO 65686
GILLISPIE, ROY GP
BRANSON HGTS
BRANSON, MO 65616
GLASS, WM J GP
315 A BROADWAY
MONETT, MO 65708
GLOVER, WM A GP
207 S MARKET ST
MOUNT VERNON, MO 65712
GRAVES, ARTHUR J GP
BOX I90
MOUNT VERNON, MO 65712

AGEN, MICHAEL O GP
500-A PORTER
AURORA, MO 65605
ALVERSON, LARRY W FP
500-A PORTER AVE.
AURORA, MO 65605
AMILTON, WM P GP
BOX 469
AURORA, MO 65605
ELLWEG, CHAS E PUD
MOUNT VERNON, MO 65712
UNTINGTON, IONE PUD
MO STATE CHEST HOSP
MOUNT VERNON, MO 65712
ENNEY, ROY E GP
113 W HICKORY
NEOSHO, MO 64850
ERR, FRANK T GP
511 W CLEVELAND
MONETT, MO 65708
ING, JAMES C GP
113 W. HICKORY
NEOSHO, MO 64850
ENTZ, HAROLO C GP
603 HIGHLAND P
NEOSHO, MO 64850
ARS, HARTLEY F CRS
FORSYTH, MO 65653
C MILLAN, OAVID L IM
113 WEST HICKORY
NEOSHO, MO 64850
ERIDETH, MARY J GP
P O ORAWER H
CASSVILLE, MO 65625
ONTELLANO, ARTURO H OBG
808 EUCLIO
MONETT, MO 65708
ORRISON, THOS A GP
203 WASHINGTON
AURORA, MO 65605
CCENO, VICTOR G GS
808 EUCLID
MONETT, MO 65708
LIVE, GEO C A
113 W HICKORY ST
NEOSHO, MO 64850
ARKISON, DONALD E GP
2260 S. FREMONT
TOWNHOUSE #3
SPRINGFIELO, MO 65804
EGIER, CARL M R
SKAGGS COMMUNITY HOSP
CAHILL RO
BRANSON, MO 65616
DPER, STANLEY O GP
BOX 160
OZARK, MO 65721
AYLOR, LEO T AM
P O BOX 249
NEOSHO, MO 64850
HITE, RUSSELL D GP
DOCTORS BLOG
500-A PORTER AVE
AURORA, MO 656D5
ILLIAMS, JAMES R R
500 PROTER ST.
AURORA, MO 65605
OMMACK, FRED L GP
CRANE, MO 65633

70—PEMISCOT

ENITONE, JERRY D GS
BOX 201
CARUTHERSVILLE, MO 63830
ERNARD, JAMES W OBG
OOCTORS CLINIC BOX 201
CARUTHERSVILLE, MO 63830
RABLE, JAMES D GP
203 E 3RO ST
PORTAGEVILLE, MO 63873
UBIN, ALAN S PD
106 W 12TH ST
CARUTHERSVILLE, MO 63830
AYES, JOHN W IM
P. O. BOX 1118
400 CARLETON
CARUTHERSVILLE, MO 63830
AZEL, JAMES G JR R
PEMISCOT CO MED. CTR.
HAYTI, MO 63851
C COY, WARREN R GP
1117 WARO AVE
CARUTHERSVILLE, MO 63830
C KASKLE, CLARENCE W GP
400 CARLETON AVE
CARUTHERSVILLE, MO 63830
AINTER, ANDREW E GP
223 KING STREET
PORTAGEVILLE, MO 63873
AINTER, LATTIE B GP
204 E 3RD ST
PORTAGEVILLE, MO 63873
HIREY, ARNOLD G GP
200 S 4TH ST
HAYTI, MO 63851

174—PERRY-STE. GENEVIEVE

CARRON, OSCAR A OS
P O BOX 266
MEOICAL ARTS BLDG
PERRYVILLE, MO 63775
CHEN, I-HSIUNG GP
POINTE BASSE PLAZA MALL
STE GENEVIEVE, MO 63670
DE GENOVA, GERARO H GP
HOSPITAL LANE
CENTER DRIVE
STE GENEVIEVE, MO 63670
EUGENIO, ROMEO R PD
PERRY PLAZA
PERRYVILLE, MO 63775
FAIRCHILD, JAMES F GP
12 S JACKSON
PERRYVILLE, MO 63775
FELTZ, LAWRENCE W GP
PERRY PLAZA MED CENTER
PERRYVILLE, MO 63775
FISCHER, THEODORE IM
P O BOX 146
ALTENBURG, MO 63732
GONZALES, JOSE H U
PERRY PLAZA MEDICAL CEN
PERRYVILLE, MO 63775
HOYE, ROBERT C GS
149 M POINTE BASSE PLAZ
STE GENEVIEVE, MO 63670
LAI, GUANG-JENG GP
51653 PHEASANT RUN
SAGINAW, MI 48603
LIMPIPHIPHATN, DHAJPHONG GS
PERRY PLAZA MED CTR
PERRYVILLE, MO 63775
LIMPIPHIPHATN, ESTER P PO
PERRY PLAZA MED CTR
PERRYVILLE, MO 63775
LUTKEWITTE, JOS F GP
610 ROZIER STREET
STE GENEVIEVE, MO 63670
MC DERMOTT, ALFRED E GP
12 S JACKSON ST
PERRYVILLE, MO 63775
PONTILLAS, JOB B GS
NORTHWEST STREETS
PERRYVILLE, MO 63775
UTTERMAN, WM F GS
LAKE FOREST ESTATES
STE GENEVIEVE, MO 63670
WARRIER, RAJKUMAR K GE
POINTE BASSE MALL
STE GENEVIEVE, MO 63670

178—PETTIS

AZAN, KENNETH N IM
1718 SOUTH INGRAM
SEDALIA, MO 65301
BLOCK, JEROME E IM
ROUTE 2 BOX 53B
SEDALIA, MO 65301
BOGER, JAMES W GP
500 W 16TH ST
SEDALIA, MO 65301
BRAZOS, JOHN C U
RR #6
SEDALIA, MO 65301
CAMPBELL, ALBERT J GP
625 E 13TH ST
SEDALIA, MO 65301
COLE, WM R GS
RT 1
SMITHTON, MO 65350
DAUM, HAROLO F R
RTE 1
SEOALIA, MO 65301
EOMONOS, ROBT W PD
1718 S INGRAM
SEDALIA, MO 65301
EDWARDS, OAVID R GP
700 S LIMIT AVE
SEDALIA, MO 65301
ELOENBURG, OONALO O GP
700 S LIMIT
SEOALIA, MO 653D1
ERICKSON, HARTLEY J ORS
1718 S INGRAM
SEDALIA, MO 65301
FARKAS, JAMES R R
BOTHWELL MEMORIAL HOSPI
RADIOLOGY DEPT
SEDALIA, MO 65301
FISHER, STANLEY O GP
5DO W 16TH ST
SEDALIA, MO 65301
GLASS, ROBT L GS
1501 SOUTH GRAND
SEDALIA, MO 65301
HOPKINS, THOMAS S IM
1718 S INGRAM
SEDALIA, MO 65301
HOPKINS, THOS J GP
700 S LIMIT ST
SEDALIA, MO 65301
HOROCHOWSKY, ALEJANORO GS
1718 SOUTH INGRAM
SEOALIA, MO 65301
LAFFOON, ROBERT G GS
C/O PHS INDIAN HOSP.
LAWTON, OK 73501
LAMY, JOHN E OS
400 OAL-WHI-MO COURT
SEDALIA, MO 65301
LOWE, ALVIN L GP
621 W 16TH
SEDALIA, MO 65301
MADDOX, ALBERT R US
116 1/2 W MAIN
SEDALIA, MO 65301
OWENS, JOHN H PTH
BOTHWELL MEMORIAL HOSPI
SEDALIA, MO 65301
PROCTOR, DONALD C GP
700 S LIMIT ST
SEDALIA, MO 65301
ROBERTS, PAUL A OS
110 W MARSHALL
SWEET SPRINGS, MO 65351
STAUFFACHER, C G GP
700 S LIMIT AVE
SEDALIA, MO 65301
STEWART, ROBT H R
201 DRIFTWOOD OR
SEDALIA, MO 65301
STOCKWOOD, ROBT C OBG
1718 S INGRAM
SEDALIA, MO 65301
SULL, WON-JONG GS
1501 SOUTH GRANO
SEDALIA, MO 65301
VAN DYKE, ELMER H OBG
1718 S INGRAM
SEDALIA, MO 65301
WALTER, ARCHIE L GP
1000 WEST 7TH STREET
SEDALIA, MO 65301
WORLEY, CHAS A GP
204 RUBY ST
SWEET SPRINGS, MO 65351

182—MID-MISSOURI (Phelps-Crawford-Dent-Pulaski-Maries-Laclede Counties)

ANDREASSEN, OIMIL F OS
18 OORIE
O'FALLON, MO 63366
BARTLETT, HUGH C GP
1100 W 10TH ST
ROLLA, MO 65401
BAUMANN, ALBERT R GP
STEELVILLE, MO 65565
BHARATH, SOMASUNDARAM GE
ARMY HOSP
BOX 1352
FT LEONARD WOOD, MO 65473
BHATI, DEO K GS
5TH AND N HENDERSON
SALEM, MO 65560
BUTTS, JAMES D GP
100 ADRIAN
ROLLA, MO 65401
COLLINS, JACK R AN
207 E WASHINGTON
RICHLANO, MO 65556
CONE, WM D P
1100 W 10TH ST
ROLLA, MO 65401
DRAKE, AVERY A OPH
4357 N 106TH AVE
PHOENIX, AZ 85039
ORAPER, BERNARD L OBG
1100 W 10TH ST
ROLLA, MO 65401
ELDERS, FRANK A GP
RT 1 BOX 69A
CUBA, MO 65453
FEIND, EARL E GP
BOX 13
ROLLA, MO 65401
FORTIN, JORGE A OBG
700 W 11TH STREET
ROLLA, MO 65401
GRANNEMANN, H N PTH
1000 W 10TH ST
ROLLA, MO 65401
HAMMLER, CHRISTIANA V GP
PHELPS COUNTY HOSP
ROLLA, MO 65401
HEILBRUNN, ILSE US
1203B FORUM
ROLLA, MO 65401
KHAN, MOHAMMED V.H. IM,
BOX 1574 US GEN LEONARD WOOO
ARMY HOSP
FT LEONARD WOOO, MO 65473
MARTI, LARRY B ORS
1100 W 1DTH ST
ROLLA, MO 65401
MITCHELL, ROY E GP
104 N MAIN
SALEM, MO 65560
MYERS, JAMES M GP
1016 W 12TH ST
ROLLA, MO 65401

PENDELL, PAUL W GS
1662 POINT BLANK LOOP
CANNON AIR FORCE BAS
CLOVIS, NM B8101
POJANASOMBOON, PICHAT OPH
1100 W 10TH ST
ROLLA, MO 65401
RUSSELL, BARBARA E PD
11TH AND BISHOP
ROLLA, MO 65401
SAUNDERS, CAROL S PD
C/O RUSSELL YOUNG CLINI
11TH AND BISHOP ST
ROLLA, MO 65401
SAUNDERS, JOHN A PD
RT 4 BOX 197
ROLLA, MO 65401
SHUKLA, JYOTINDRA D IM
W 3RD STREET
SALEM, MO 65560
SLAHOREK, GEORGE J PTH
GEN LEONARD WOOD ARMY H
PATHOLOGY DEPT
FORT LEONARD WO, MO 65473
SMITH, TED P GP
S&S ACRES ROUTE 2
ROLLA, MO 65401
STRICKER, EAMIL A GS
10TH & BISHOP
ROLLA, MO 65401
SULLIVAN, WILLIAM J P
27 MACKENZIE OR
FORT LEONARD WO, MO 65473
TANG, TEODORO GS
BOX 437
SALEM, MO 65560
THEOBALD, STERLING GP
BOX 7116 A
ST. LOUIS, MO 63177
WHITE, EUGENE F OBG
700 W 11TH ST
ROLLA, MO 65401
WIENCH, DELANE F PTH
1000 WEST 10TH ST
ROLLA, MO 65401
YOUNG, ROBT B GP
700 W 11TH ST
ROLLA, MO 65401

186—PIKE

GLENN, EOWARD A GS
14 LAKESHORE DR
BOWLING GREEN, MO 63334
JACKSON, EDWARD K GP
108 N 3RD ST
CLARKSVILLE, MO 63336
LEWELLEN, CHAS H GP
120 PROFESSIONAL BLDG
LOUISIANA, MO 63353
MARTIN, WENOELL J GP
211 S 3RD ST
LOUISIANA, MO 63353
MIDDLETON, JOHN W GP
301A GEORGIA ST
LOUISIANA, MO 63353
NICKELS, MATHEW L R
1917 N DEWOLF
FRESNO, CA 93727
PITNEY, PHILLIP W GP
211 S 3RD
LOUISIANA, MO 63353
STUERMAN, LAWRENCE G GP
211 S 3RD ST
LOUISIANA, MD 63353
WILCOXEN, WM B OPH
BOWLING GREEN, MO 63334

188—PLATTE

ALLEN, SAML L AN
3B09 NW 62ND TERR
KANSAS CITY, MO 64151
KIMBALL, IRELAND W OS
5621 VALLEY RD N.W.
KANSAS CITY, MO 64151
THURMAN, HILL C GP
6600 TOWER DR
PARKVILLE, MO 64152
VESCOVO, PAUL C IM
4106 VIVION RD
KANSAS CITY, MO 64119

190—ST. LOUIS METROPOLITAN

AACH, RICHARO D IM
BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
ABADA, ROLANO AN
3936 ROUNDTABLE CT.
ST LOUIS, MO 63129
ABBOUO, NABIL AN
216 S KINGS HIGHWAY
ST LOUIS, MO 63110
ABEL, CHAS C IM
4511 FOREST PARK
ST LOUIS, MO 63108
ABEL, OLIVER IM
4511 FOREST PARK BLVD
ST LOUIS, MO 6310B
ABELARDO, MIGUEL L IM
300 S GRAND
ST LOUIS, MO 63139
ABELL, WALTER E PH
6261 REBEN PL
ST LOUIS, MO 63139
ABINOJA, CONRADO B IM
4909 LINDENWOOO
ST LOUIS, MO 631D9
ABODEELY, DANIEL R
5B6 PINETREE LAKE
CHESTERFIELD, MO 63017
ABRAMS, MORRIS U
4625 LINDELL BLVD STE 3
ST LOUIS, MO 6310B
ABRAMSON, CHAS L R
141 N MERAMEC
ST LOUIS, MO 63105
ABU-SLEIMAN, RAYMOND U
1325 S GRAND
ST LOUIS, MO 63104
ACKER, HARRY L PM
950 FRANCIS
ST LOUIS, MO 63105
ACKERMAN, LAUREN V PTH
#8 CHICKADEE WAY
STRANGE NECK SETAUKE
EAST SETAUKET, NY 11733
ADELMANN, EUGENE N
1035 BELLEVUE
ST LOUIS, MO 63117
ADEYEMI-DORO, HENRY O GS
6000 W. FLORISSANT
ST LOUIS, MO 63136
ADLER, BENARD C OTO
4511 FOREST PARK BLVD
ST LOUIS, MO 63108
AFF, HELEN PD
1412 SPAEDE RD
ST LOUIS, MO 63131
AFUWAPE, EMMANUEL A GS
2601 N WHITTIER
ST LOUIS, MO 63113
AGASINO, ARMELA M GP
#6 WEST SHORE VILLAGE
CUBA, MO 65453
AGASINO, GAUDENCIO L OBG
#20 HUGHES FORD ROAD
SULLIVAN, MO 630B0
AGRESS, HARRY PTH
B631 DELMAR BLVD
ST LOUIS, MO 63124
AGUINALDO, JAIME A IM
9313 MANCHESTER RD
ST LOUIS, MO 63119
AHADI, ABD U IM
13029 AMBOIS DR
ST LOUIS, MO 63141
AHERN, ARCHIBALD M IM
3915 WATSON RD
ST LOUIS, MO 63109
AHLERING, GEO H OBG
621 S NEW BALLAS STE 56
ST LOUIS, MO 63141
AHMAD, BASHIR AN
5900 BOND
EAST ST LOUIS, IL 62207
AHMED, NOOR PS
ST LOUIS UNIV
ST LOUIS, MO 63104
AITKEN, LOUIS F IM
4989 BARNES HOSPITAL PL
5102 QUEENY TOWER BL
ST LOUIS, MO 63110
AKER, UMIT T CD
950 FRANCIS
ST LOUIS, MO 63105
AKYOL, SALIM CD
5505 DELMUR STE 506
ST LOUIS, MO 63112
AL-ALY, MOHAMMED R
B129 PERSHING AVE
CLAYTON, MO 63105
ALBERA, VICTOR H OS
RR #2-BOX 236
ST CLAIR, MO 63077
ALBERT, INGRID O
2428 WOODSON
ST LOUIS, MO 63114
ALEGRE, JORGE M IM
5535 DELMAR BLVD
ST LOUIS, MO 63112
ALEKSANDER, BERNARDO G P
1420 GRATTAN
ST LOUIS, MO 63104
ALEX, MORRIS IM
522 N NEW BALLAS RD
ST LOUIS, MO 63141
ALEXANDER, GEO K GS
2821 N BALLAS RD
ST LOUIS, MO 63141
ALLEN, HENRY C PTH
2B21 N BALLAS RD
ST LOUIS, MO 63131
ALLEN, HOLLIS N PTH
2B21 NORTH BALLAS RD
ST LOUIS, MO 63131
ALLEN, JAMES H PTH
11133 DUNN RD
ST LOUIS, MO 63136
ALLEN, MELVIN A OB
3555 SUNSET OFFICE DR
ST LOUIS, MO 63127
ALLEN, WILLARD M OB
UNIV OF MARYLAND HOSP
BALTIMORE, MD 21201
ALLEN, WM E TR
4951 MAFFITT PL
ST LOUIS, MO 63113
ALMIRON, OSIAS A GS
120 PROGRESS PKWY
MARYLAND HEIGHT, MO 63D43
ALONSO, JOSE M GP
10547 KENNERLY DRIVE
ST LOUIS, MO 63128
ALONSO-YAGUE, PASCUAL IM
4585 WASHINGTON
FLORISSANT, MO 63033
ALTHEIDE, HARVEY E D
9 MAGNOLIA DR
ST LOUIS, MO 63124
ALTHEIDE, JOHN P U
477 CLAYTON RD
BALLWIN, MO 63011
ALVAREZ, ULISES C IM
4585 WASHINGTON
SUITE A1
FLORISSANT, MO 63033
ALVIS, EDMUND B DP
211 N MERAMEC
ST LOUIS, MO 63105
AMADO-LEDO, DAVID E GP
300 S GRAND BLVD
ST LOUIS, MO 63103
AMANAT, HABIBOLLAN DS
232 STN WOODSMILL
ST LUKES HOSPITAL
CHESTERFIELD, MO 63017
AMIN, AURORA P
177 PLANTATION DRIVE
ST LOUIS, MO 63141
AMIN, NAVIN P OPH
607 N GRAND STE 425
ST LOUIS, MO 63103
AMJAD, MOHAMMAO T PD
1211 BLAIRSHIRE DR
BALLWIN, MO 63011
ANDERSON, CHARLES B GS
6343 ALEXANDER DR
CLAYTON, MO 63105
ANDERSON, JOHN M P
100 N EUCLID
ST LOUIS, MO 63108
ANGLO, LUIS B GP
10004 KENNERLY RD
SUITE 155
ST LOUIS, MO 6312B
ANSLINGER, DAVID L IM
14329 LAKE TAHOE DR
CHESTERFIELD, MO 63017
ANSTEY, GEO C
10449 ST CHARLES ROCK R
ST ANN, MO 63074
ANSTEY, JOHN DBG
#15 HORTENSE PL
ST LOUIS, MO 6310B
ANTONIOU, CHRISTOS A PD
3434 BRIDGLAND
BRIDGETON, MO 63044
ANWAR, MOHAMMAD A GE
P. O. BOX 130
FENTON, MO 63026
AQUINO, TOMAS PTH
615 S NEW BALLAS RD
ST LOUIS, MO 63141
ARCELONA, JESUS GP
3535 S JEFFERSON
ST LOUIS, MO 6311B
ARCHER, CAROL R R
1325 S GRAND
ST LOUIS, MO 63104
ARENOS, PROCESO T GS
120 PROGRESS PKWY
MARYLAND HEIGHT, MO 63043
ARIAS, FERNANDO OBG
4911 BARNES HOSP PLAZA
ST LOUIS, MO 63110
ARNESON, AXEL N OBG
4511 FOREST PARK
ST LOUIS, MO 63108
ARNEY, WM G P
16 HAMPTON VILLAGE
ST LOUIS, MO 63109
ARNOLO, KENNETH J GS
4960 AUOUBON AVE
ST LOUIS, MO 63110
ARNOT, JOHN P DRS
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63105
ARONBERG, JEROME M D
141 N MERAMEC
ST LOUIS, MO 63105
ARONSON, ABRAHAM P
522 N NEW BALLAS RD
ST LOUIS, MO 63141
ARRIBAS, NEVA P OPH
QUEENY TOWER BLDG STE 5
ST LOUIS, MO 63110

ASGHAR, MOHAMMAD OS
HOMER G PHILLIPS HOSP.
ST LOUIS, MO 63113
ASHBY, RICHARD NS
621 S NEW BALLAS
ST LOUIS, MO 63141
AUER, ARTHUR I GS
667 LANGTON
ST LOUIS, MO 63105
AUFDER HEIDE, G R IM
216 NORTHLAND MEDICAL B
ST LOUIS, MO 63136
AUGUSTE, MELEDAIN PD
4400 LINDELL B-1
ST LOUIS, MO 63108
AUGUSTIN, CESAR R
40 LAOUE MEADOWS
ST LOUIS, MO 63141
AVIOLI, LOUIS V IM
216 S KINGSHIGHWAY
ST LOUIS, MO 63110
AYATA, SEOAT M AN
6420 CLAYTON RO
ST LOUIS, MO 63117
AYKENT, YAVUZ CO
950 FRANCIS PL
ST LOUIS, MO 63105
AYLWARD, HOWARD J PS
6651 CHIPPEWA
ST LOUIS, MO 63109
AYRES, ROBERT A GP
615 S. NEW BALLAS
ST. LOUIS, MO 63141
AYRES, STEPHEN M CO
1325 SOUTH GRAND BLVD
ST LOUIS, MO 63104
AYVAZIAN, VATCHE H GS
615 S NEW BALLAS RO
ST LOUIS, MO 63141
AZUMA, NOBUTAKA GP
3901 THOLOZAN
ST LOUIS, MO 63116
BABKA, JOS J GS
29 BELLERIVE COUNTRY CL
GROUNDS
ST LOUIS, MO 63141
BACKER, MATTHIAS H OBG
10345 WATSON RO
ST LOUIS, MO 63127
BAER, JILL M PO
10004 KENNERLY RO
ST. LOUIS, MO 6312B
BAGBY, JAMES W O
COUNTRY LIFE ACRES APT
ST LOUIS, MO 63131
BAGWE, LATA R OBG
1404 CHANOELLAY DR
CREVE COEUR, MO 63141
BAHL, OM P CD
10004 KENNERLY RO. #320
ST LOUIS, MO 6312B
BAILEY, ORENNAN GS
6356 CLAYTON RO
ST LOUIS, MO 63117
BAILEY, WM H OPH
9157 MILTON AVE
ST LOUIS, MO 63114
BALDWIN, RICHARD ORS
1034 SOUTH BRENTWOOO
SUITE 95B
ST LOUIS, MO 63117
BALLAL, H S IM
3915 WATSON RO
ST LOUIS, MO 63109
BALLINGER, WALTER F GS
4960 AUOUBON AVE
ST LOUIS, MO 63110
BALSTER, VERNON H OM
B19 LOCUST
ST LOUIS, MO 63101
BAMSHAD, JERRY US
1125 GRAHAM RD
FLORISSANT, MO 63031
BANDLE, DONALO F P
3801 JANUARY AVE
ST LOUIS, MO 63109
BANEZ, COLITA L P
5400 ARSENAL
ST LOUIS, MO 63144
BANTON, MILAGROS T IM
13634 PEACOCK FARM RD
ST LOUIS, MO 63131
BANTON, THOMAS J ORS
12255 OE PAUL OR
BRIDGETON, MO 63044
BANTON, WM C PH
801 S BRENTWDOD
ST LOUIS, MO 63105
BARDSLEY, JOHN L R
621 S NEW BALLAS RD
ST LOUIS, MO 63141
BARKER, EOWARD T PO
282I N BALLAS RD
ST LOUIS, MO 63131
BARNER, HENDRICK B GS
1325 S GRANO BLVD
ST LOUIS, MO 63104
BARRAGAN, HECTOR O GS
901 CLAYTON RO
BALLWIN, MO 63011

BARRETT, SCOTT R OBG
5505 DELMAR
ST LOUIS, MO 63112
BARRETT, SCOTT R JR OBG
591 SUNBRIDGE DR.
CHESTERFIELD, MO 63017
BARROW, JACK IM
35 N CENTRAL AVE
ST LOUIS, MO 63105
BARTELL, MICHAEL F.L. IM
1035 BELLEVUE AVE.
ST. LOUIS, MO 63117
BARTNICK, MITCHEL L GP
RR 2 BOX 38
DE SOTO, MO 63020
BARTON, LESLIE G IM
1022 WILO CHERRY
ST LOUIS, MO 63130
BARTON, ROBT W GE
4910 FOREST PARK
ST LOUIS, MO 6310B
BASHITI, MOHAMMAO F AN
660 S EUCLID
ST LOUIS, MO 63110
BASSMAN, ROLAND S GP
1755 SOUTH GRAND
ST LOUIS, MO 63104
BAUER, EUGENE A D
BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
BAUER, JOHN O PTH
104 NORTHLANO MED BLOG
ST LOUIS, MO 63136
BAUER, JOS A PO
5 RIOGEWDOO RD
ST LOUIS, MO 63124
BAUER, ROBT A GP
23B6 N HIGHWAY 67
FLORISSANT, MO 63033
BAUER, SPOMENKO AN
1016 RIDGEBROOK RO.
ST LOUIS, MO 63131
BAULA, ARMINDO G R
609 JEFFERSONIAN OR
ST LOUIS, MO 63125
BAUMGARTEN, WALTER IM
1034 S BRENTWDOO BLVO S
ST LOUIS, MO 63117
BAUSCHARD, FREOERICK D O
469 N. HANLEY RO.
ST LOUIS, MO 63130
BEARE, J B U
777 S NEW BALLAS RD
ST LOUIS, MO 63141
BEARE, LUCIA V AN
I2 COACH N FOUR
ST. LOUIS, MO 63131
BEASLEY, LOUIS K GE
4555 MANATEE TERR.
STUART, FL 33494
BEATO, OAVIO L IM
6305 OEVONSHIRE
ST LOUIS, MO 63109
BEATY, WM R OBG
35 MUILFIELO LANE
ST LOUIS, MO 63141
BECKER, BERNARD OPH
660 S EUCLID
ST LOUIS, MO 63110
BECKER, EOWARO J U
511 SO WARSON RO
ST LOUIS, MO 63124
BECKER, ROBT L OBG
2B21 N BALLAS RO
ST LOUIS, MO 6313I
BECKER, STANLEY C OPH
4401 HAMPTON
ST LOUIS, MO 63109
BECKETTE, EOMUNO OBG
I245 GRAHAM RD RM 302
FLORISSANT, MO 63031
BECKMAN, DONALO E GP
4205 VIRGINIA AVE
ST LOUIS, MO 6311I
BEDWINEK, JOHN R
4511 FOREST PARK BLVO.
ST. LOUIS, MO 63108
BEHBAHANI, PARVIZ M AN
ST LOUIS UNIV MED DEPT
ST LOUIS, MO 63104
BEHRENS, DONALO T GS
3654 S GRANO AVE
ST LOUIS, MO 63118
BEHRENS, GERALO L GS
11271 HERMITAGE HILL PL
ST LOUIS, MO 63131
BEIDLE, RAYMOND J PO
500 NW PLAZA-RM 5I3
ST ANN, MO 63074
BELANCOURT, OUNET F IM
600 UNION
ST LOUIS, MO 6310B
BELEW, JOE E OBG
777 S NEW BALLAS RO STE
ST LOUIS, MO 6314I
BELL, MARTIN J GS
500 S KINGSHIGHWAY
ST LOUIS, MO 63110

BENAGE, CLARENCE M GS
1125 GRAHAM RD
FLORISSANT, MO 63031
BENEDICT, WILLIAM W US
522 N NEW BALLAS RD
CREVE COEUR, MO 63141
BENNETT, JOHN OBG
6150 OAKLAND
ST LOUIS, MO 63139
BENNETT, KENNETH J GS
456 N NEW BALLAS RD
ST LOUIS, MO 63141
BENOIST, WALTER F PD
119 CHURCH ST
ST LOUIS, MO 63135
BENSON, JOHN F OBG
3737 N KINGSHIGHWAY
ST LOUIS, MO 63115
BERARD, LOUIS N U
721 OLIVE ST-ROOM 912
ST LOUIS, MO 63101
BERG, EOWARO F OPH
5 CEDARCREST
ST LOUIS, MO 63132
BERG, LEONARO N
49B9 BARNES HOSP PLAZA-
ST LOUIS, MO 63110
BERG, RALPH GP
3203 S GRAND BLVO
ST LOUIS, MO 6311B
BERGER, EOWARO J GPM
300 S GRANO BLVO
ST LOUIS, MO 63103
BERGMAN, HUGO F GP
8321 N BROAOWAY
ST LOUIS, MO 63147
BERGMANN, OWAYNE L US
6500 CHIPPEWA ST
ST LOUIS, MO 63109
BERGMANN, JOHN F P
522 N NEW BALLAS RO
ST LOUIS, MO 63141
BERGMANN, MARTIN TS
B515 DELMAR BLVO
ST LOUIS, MO 63124
BERGNER, GRACE E IM
I14 N TAYLOR AVE
ST LOUIS, MO 6310B
BERLANO, HARRY I R
141 N MERAMEC
CLAYTON, MO 63105
BERMAN, WM OBG
4910 FOREST PARK BLVO
ST LOUIS, MO 63108
BERNABE, FLORINIO H OBG
2250 UNION RO
ST LOUIS, MO 63125
BERNABE, OFELIA M IM
1642 FRONTENACWOOD LANE
FRONTENAC, MO 63131
BERNOSEN, GERARD H GP
12933 TOPPING ESTATES S
ST LOUIS, MO 63131
BERNI, ANTHONY A R
777 S NEW BALLAS ROAO
ST LOUIS, MO 63141
BERNSTEIN, AARON M IM
7171 DELMAR
ST LOUIS, MO 63130
BERRY, JOHN W IM
62I S NEW BALLAS RD-STE
ST LOUIS, MO 63141
BERWALD, OAVIO M GS
117B9 NATURAL BRIDGE
BRIOGETON, MO 63044
BERWALO, IRVIN I GP
747 OLO BOHOMME ROAO
ST LOUIS, MO 63132
BETTONVILLE, PAUL J IM
633I PERSHING
ST LOUIS, MO 63130
BHATTACHARYA, ARJUN GS
7200 MANCHESTER RO
ST LOUIS, MO 63143
BIDOY, RALPH L P
965 MASONRIOGE RD
ST LOUIS, MO 63141
BIELLO, DANIEL R OR
510 SOUTH KINGSHIGHWAY
ST LOUIS, MO 63110
BIGGS, JOHN P
I034 SO BRENTWOOO SUITE
ST LOUIS, MO 63117
BILCHIK, RONALO C OPH
777 S NEW BALLAS ROAO
ST LOUIS, MO 63141
BILLY, LAWRENCE J GS
I1115 NEW HALLS FERRY R
FLORISSANT, MO 63033
BILSKY, NATHAN IM
2851 NE 1B3RO ST
MIAMI, FL 33160
BINDBEUTEL, DONALO A GS
25 WILLOW OAK LANE
ST LOUIS, MO 63122
BINOER, MORTON A IM
4652 MARYLANO AVE
ST LOUIS, MO 6310B

BINNINGTON, H B GS
621 S NEW BALLAS RD
ST LOUIS, MO 63141
BIRCHER, JOHN L R
3932 FEDERER PL
ST LOUIS, MO 63116
BIRD, H W P
10287 CLAYTON
ST LOUIS, MO 63124
BIRENBAUM, AARON IM
10511 OLD OLIVE ST RD
ST LOUIS, MO 63141
BIRGE, CLIFFORD A IM
12 RIDGETOP
RICHMOND HEIGHT, MO 63117
BISHOP, MARION D GS
751 ST FRANCIS ST
FLORISSANT, MO 63031
BISNO, DANL OPH
8000 BONHOMME AVE
CLAYTON, MO 63105
BLACK, JOSEPH T N
49B9 BARNES HOSP PLAZA
ST LOUIS, MO 63110
BLACKMAN, PATRICIA A PD
300 ALTUS
ST LOUIS, MO 63122
BLAIR, JOHN D PTH
1465 S GRAND
ST LOUIS, MO 63104
BLAIR, OLGA M PTH
1402 S GRAND
ST LOUIS, MO 63104
BLAIR, VILRAY P ORS
42 MAGNOLIA DR.
ST LOUIS, MO 63124
BLATH, RICHARD A U
777 S NEW BALLAS RD
ST LOUIS, MO 63141
BLEISCH, VIRGIL R PTH
6150 OAKLAND AVE
ST. LOUIS, MO 63139
BLOCK, ARNOLD S P
100 N EUCLID AVE STE 60
ST LOUIS, MO 6310B
BLOUNT, LEE GS
3737 N KINGSHIGHWAY
ST LOUIS, MO 63115
BLYTHE, JAMES G OBG
615 S NEW BALLAS RD
ST LOUIS, MO 63141
BOBROW, JAMES C OPH
211 NORTH MERAMEC
ST LOUIS, MO 63105
BOCCAROO, HUMBERTO IM
42 HOLLY DR.
ST LOUIS, MO 63119
BOCKELMAN, CLIFFORD H IM
2615 BRENTWOOD BLVD
ST LOUIS, MO 63144
BOEDEKER, ROY V OBG
1035 BELLEVUE AVE
ST LOUIS, MO 63117
BOHIGIAN, GEO M OPH
456 N NEW BALLAS RD.
SUITE 259
ST LOUIS, MO 63131
BOHLING, COREY A CD
621 S NEW BALLAS ROAD
ST LOUIS, MO 63141
BOLDIZAR, ALBERT G OPH
2B21 N BALLAS RD
ST LOUIS, MO 63131
BOLDT, THOS H IM
3394 MC KELVEY RD
BRIDGETON, MO 63044
BOLES, C R PD
35 N CENTRAL AVE
CLAYTON, MO 63105
BOLINSKE, ROBT E A
11722 STUDT AVE
ST LOUIS, MO 63141
BOLLOZOS, GEORGE D PTH
3933 S BROADWAY
ST LOUIS, MO 63118
BOLTON, ROBT L GS
740 S 4TH ST
ST LOUIS, MO 63102
BONACORSI, JOHN OTO
12255 DEPAUL DR.
BRIDGETON, MO 63044
BOND, LESLIE F GS
3400 N KINGS HWY
ST LOUIS, MO 63115
BONDURANT, BRYCE H OBG
134 FRONTENAC FOREST
ST LOUIS, MO 63131
BONFANTI, ALBERT L OBG
P O BOX 414B JENNINGS S
ST LOUIS, MO 63136
BONIUK, ISAAC OPH
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
BONSANTI, ROBT L IM
3394 MC KELVEY RD
BRIDGETON, MO 63044
BOONKHAM, CHOTCHAI IM
3466 BRIDGELAND DR
BRIDGETON, MO 63044
BOONSHAFT, BENJE IM
10511 OLD OLIVE ST RD
ST LOUIS, MO 63141
BOROWSKY, BENJ A IM
4910 FOREST PK
ST LOUIS, MO 63108
BORTNICK, ARTHUR R OBG
777 S NEW BALLAS RD
ST LOUIS, MO 63141
BOSCHE, ALFRED J OBG
456 NORTH NEW BALLAS RD.
ST. LOUIS, MO 63141
BOUHASIN, JOHN D IM
3720 HAMPTON
ST LOUIS, MO 63109
BOURJOLLY, WILSON P OPH
106 AMBLESIDE LANE
ST LOUIS, MO 63141
BOURKE, THOS E IM
3394 MC KELVEY RD
BRIDGETON, MO 63044
BOVERI, JOS C OBG
1862 POINT OAK DR
ST LOUIS, MO 63131
BOWDERN, EDWARD H GS
4440 LINDELL
APT. 1102
ST LOUIS, MO 6310B
BOWEN, STEPHEN F OPH
16 HAMPTON VILLAGE PLZ
ST LOUIS, MO 63109
BOWER, RICHARD GS
4960 AUDUBON
ST LOUIS, MO 63110
BOWERMAN, HAROLD H OTO
607 N GRAND BLVD
ST LOUIS, MO 63103
BOWERS, JAMES E PD
12166 BIG BEND BLVD
KIRKWOOD, MO 63122
BOWERSOX, WARREN A GS
319 N 1ST ST
PACIFIC, MO 63069
BOWLES, G R IM
12166 BIG BEND
ST LOUIS, MO 63122
BOWLES, WM T U
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
BOYARSKY, SAUL U
4960 AUDUBON AVE
ST LOUIS, MO 63110
BRADLEY, RICHARD V GS
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
BRADY, HARRY R OPH
1609 DUNMRR DR
ST LOUIS, MO 63131
BRANCATO, OONALD H ORS
11155 DUNN RD
APT 127
ST LOUIS, MO 63136
BRAND, EARL L GP
120 E LOCKWOOD
ST LOUIS, MO 63119
BRANGLE, ROBT W PTH
765 HIGH HAMPTON RD
ST LOUIS, MO 63124
BRAUFMAN, HARVEY S OPH
111 CHURCH ST
FERGUSON, MO 63135
BREMER, RITA F IM
3024 ORTON ST
ST CHARLES, MO 63301
BREMSER, HARRY L GP
6742 PLAINVIEW AVE
ST LOUIS, MO 63109
BRENNAN, DANL J PS
777 S NEW BALLAS RD
ST LOUIS, MO 63141
BRENNAN, GEO A OBG
3535 S JEFFERSON
ST LOUIS, MO 6311B
BRENNAN, ROBT A OBG
3535 S JEFFERSON
ST LOUIS, MO 63118
BRENNAN, ROBT V U
114 N TAYLOR
ST LOUIS, MO 63122
BRERETON, ROBT L GS
206 N CLAY AVE
KIRKWOOD, MO 63122
BRICKER, EUGENE M GS
2410 RIDGEFIELD RD
COLUMBIA, MO 65201
BRIELMAIER, CHARLES AN
6420 CLAYTON
ST LOUIS, MO 63117
BRIGHAM, DAVID W OPH
1103 OOVERGATE
ST LOUIS, MO 63122
BRIMMO, A I GS
6000 W FLORISSANT
ST LOUIS, MO 63136
BRION, PACELLI E US
6500 CHIPPEWA STE 307
ST LOUIS, MO 63109
BRISCOE, JOHN R GP
7346 A MANCHESTER
MAPLEWOOD, MO 63143
BRODEUR, ARMAND E US
1465 S GRAND AVE
ST LOUIS, MO 63104
BRODY, ARNOLD G GP
B553 COLONIAL LA
ST LOUIS, MO 63124
BRONSON, SHAEL S P
777 S NEW BALLAS RD
ST LOUIS, MO 63141
BROOKES, ROBT D P
5505 DELMAR BLVD
ST LOUIS, MO 63112
BROUN, GORONWY O IM
6359 WATERMAN AVE
ST LOUIS, MO 63105
BROWN, JAMES M IM
11936 BETH DR
ST LOUIS, MO 63126
BROWN, SEYMOUR AN
2421 BAXTON WAY
CHESTERFIELD, MO 63017
BRUCE, HELEN M PH
3263 HAWTHORNE BLVD
ST LOUIS, MO 63104
BRUNS, KENNETH AN
7700 FLORISSANT RD
ST LOUIS, MO 63121
BRYAN, JAMES H OPH
950 FRANCIS PLACE
CLAYTON, MO 63105
BRYAN, WM T A
950 FRANCIS PL
CLAYTON, MO 63105
BUCY, JAMES G U
1034 S BRENTWOOD
ST LOUIS, MO 63117
BUDD, JOHN J IM
9012 MANCHESTER RD
ST LOUIS, MO 63144
BUETTNER, JOHN B GS
3106 QUEENY TOWERS
BARNES HOSP PLAZA
ST LOUIS, MO 63110
BURDE, RONALD M OPH
660 S EUCLID AVE
ST LOUIS, MO 63110
BURDGE, ROBERT E ORS
1325 S GRAND BLVD
ST LOUIS, MO 63104
BURGESS, DEAN OPH
9380 ROBYN HILL
ST LOUIS, MO 63127
BURKE, ROBT J PD
6379 DEVONSHIRE AVE
ST LOUIS, MO 63109
BURKHART, EDWARD F D
621 S NEW BALLAS RD
ST LOUIS, MO 63141
BURMEISTER, RAY W IM
INTERMED MED CONSULTANT
3535 SO JEFFERSON SU
ST LOUIS, MO 6311B
BURNS, FRANCIS J CRS
1035 BELLEVUE AVE
ST LOUIS, MO 63117
BURNS, J R U
1325 SOUTH GRAND
ST LOUIS, MO 63104
BURNSIDE, CHAS R GP
206 W ARGONNE
KIRKWOOD, MO 63122
BURR, DONALD C R
R. R. #3
NASHVILLE, IL 62263
BURROWS, STEPHEN D R
#4 CONCORD LANE
URBANA, IL 61801
BURST, DONALD O ORS
6500 CHIPPEWA ST
ST LOUIS, MO 63109
BURSTEIN, ROBT OBG
911 S BRENTWOOD BLVD
ST LOUIS, MO 63105
BUSCH, ANTHONY K P
2101 SIDNEY ST
ST LOUIS, MO 63104
BUSSE, PAUL R
120 W MERMOD
ST LOUIS, MO 63122
BUSSMANN, DONALD W CD
4 WOOD ACRE RD
ST LOUIS, MO 63124
BUTCHER, HARVEY R GS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
BUTSCH, RICHARD H IM
901 CLAYTON RD
BALLWIN, MO 63011
BYRNE, PAUL A PD
4211 BAYLESS AVE
ST LOUIS, MO 63123
BYRUM, FRITZ A GP
650 MANCHESTER RD
BALLWIN, MO 63011
CABONCE, AUGUST L GP
6B29 PARKER RD
FLORISSANT, MO 63033
CABRAL, GALILEU IM
14377 WOODLAKE DR
CHESTERFIELD, MO 63017

CACIOLO, CARLO P IM
3654 S GRAND BLVD
ST LOUIS, MO 6311B

CACIOPPO, JOS E GP
1040 N MASON RD N
ST LOUIS, MO 63141

CADICE, JOHN B OBG
1245 GRAHAM RD
APT 40B
FLORISSANT, MO 63031

CADIZ-ROJOLES, ADORACION PD
1211B PRESTON PARK LANE
ST LOUIS, MO 63141

CAJILI, ANTONIO T IM
300 S GRAND
ST LOUIS, MO 63103

CALLAGHAN, GERARD M OBG
1035 BELLEVUE
ST LOUIS, MO 63117

CALLAHAN, DANIEL PS
1325 S GRAND BLVD
ST LOUIS, MO 63104

CALLAHAN, DONALD E R
11155 DUNN RD RM 201
ST LOUIS, MO 63136

CALLAHAN, JOS D CHP
22 W BRENTMOOR PARK
ST LOUIS, MO 63105

CALMAN, CARL H CD
7750 STANFORD
UNIVERSITY CITY, MO 63130

CALODNEY, MARTIN M PD
7247 DELMAR BLVD
ST LOUIS, MO 63130

CAMEL, H M OBG
310 TANGLEWOOD DR
ST LOUIS, MO 63124

CAMPOS, FRANCISCO J PTH
11636 ADMINISTRATION DR
ST LOUIS, MO 63141

CANAAN, SAML A OPH
607 N GRAND BLVD STE 60
ST LOUIS, MO 63103

CANLAS, ARSENIO L GS
7670 SUNRAY LANE
ST LOUIS, MO 63123

CANNON, EDWARD M U
1034 BRENTWOOD BLVD STE
ST LOUIS, MO 63117

CANTOR, HARVEY E N
11745 OLIVE ST RD
ST LOUIS, MO 63141

CAPAPAS-WAXELMAN, L R IM
9903 GRAVOIS AVE
AFFTON, MO 63123

CARDENAS, JUAN O IM
1125 GRAHAM RD
FLORISSANT, MO 63031

CARLIN, M R U
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117

CARLS, GARRY L R
6420 CLAYTON RD
ST LOUIS, MO 63117

CARLSON, ARNE E GS
3466 BRIDGELAND DR
SUITE 150
BRIDGETON, MO 63044

CARMICHAEL, KIM A IM
5535 DELMAR BLVD
ST. LOUIS, MO 63112

CARMODY, JOHN P IM
12209 ROYAL VALLEY
ST LOUIS, MO 63141

CARMONA, GILBERTO V PD
525 JEFFCO BLVD
ARNOLD, MO 63010

CARRANZA, MAURO J OS
P O BOX 10B17
ST LOUIS, MO 63129

CARRERA, MARIO GP
1125 GRAHAM RD
FLORISSANT, MO 63031

CARRIER, JOHN A IM
300 S GRAND
ST LOUIS, MO 63103

CARROLL, GEO A GS
NO 5 DELCREST COURT
AP 102
ST LOUIS, MO 63124

CARROLL, GRAYSON L U
1035 BELLEVUE
ST LOUIS, MO 63117

CARROLL, PERCY J GS
10341 MANCHESTER RD
ST LOUIS, MO 63122

CARTER, EDWIN E ORS
777 S NEW BALLAS RD
CREVE COEUR, MO 63141

CARTER, JOHN F IM
29 BERKSHIRE
ST LOUIS, MO 63117

CARY, JOHN M IM
2B21 N BALLAS RD
ST LOUIS, MO 63131

CASE, MARY E PTH
13001 DIETERLE LANE
ST LOUIS, MO 63127

CASEY, EDWIN J OPH
4466 W PINE
ST LOUIS, MO 6310B

CASEY, ELIOT C PD
615 S NEW BALLAS
ST LOUIS, MO 63141

CASON, ELBERT H GS
1704 S BROADWAY
ST LOUIS, MO 63104

CASTASUS, MANUEL A GS
600 N UNION BLVD
ST LOUIS, MO 6310B

CASTRO, JUAN M IM
3654 S. GRAND
ST LOUIS, MO 6311B

CATANZARO, ANTHONY F GP
2705 CLIFTON AVE
ST LOUIS, MO 63139

CATANZARO, FRANCIS J CD
16BB FRONTENAC WOODS LANE
ST LOUIS, MO 63131

CATANZARO, RUDOLPH E GS
B131 PAGE BLVD
ST LOUIS, MO 63130

CAYABYAB, PEDRO C GP
3610 S BROADWAY
ST LOUIS, MO 6311B

CHADARATANA, PHADUNG OTO
12666 MASON FOREST DR.,
ST LOUIS, MO 63141

CHAKROBORTTY, H U
3654 S GRAND
ST LOUIS, MO 6311B

CHALLONER, DAVID R IM
DEAN-ST LOUIS UN SC MED
ST LOUIS, MO 63104

CHAMNESS, JAMES T PS
1 ST ANDREWS DR
ST LOUIS, MO 63124

CHAPLIN, HUGH IM
DEPT OF PREVENTIVE MED
BOX B113
ST LOUIS, MO 63110

CHARLES, BENJ H IM
1034 S BRENTWOOD BLVD S
ST LOUIS, MO 63117

CHARLES, FRANCOIS CD
600 N UNION
ST LOUIS, MO 6310B

CHARNAS, RAYMOND M IM
1040 MASON RD N
ST LOUIS, MO 63141

CHAVALA, SUDARSAN OPH
2601 N WHITTIER ST.
ST. LOUIS, MO 63113

CHAVES, RUTILLO M OBG
1410 BOBOLINK PL
ST. LOUIS, MO 63144

CHAVEZ, SALVADOR GS
10010 KENNERLY RD
ST LOUIS, MO 6312B

CHEHVAL, MICHAEL J U
1035 BELLEVUE AVE
ST LOUIS, MO 63117

CHERRE, CHAS J R
4511 FOREST PARK BLVD
ST LOUIS, MO 6310B

CHESANOW, ROBT L N
1515 LAFAYETTE AVE
ST LOUIS, MO 63104

CHEUK, SHU-SUM GS
5505 DELMAR RM 306
ST LOUIS, MO 63112

CHIEFFI, MARGARET J A
6744 CLAYTON RD
ST LOUIS, MO 63117

CHINSKY, MURRAY IM
500 NORTHWEST PLAZA STE
ST ANN, MO 63074

CHIPONGIAN, RAUL A OPH
1672 FOXLEIGH COURT
ST LOUIS, MO 63131

CHISHTI, MUHAMMAD I OPH
1455B AMSTEL CT
CHESTERFIELD, MO 63017

CHIU, TAI-MAO AN
6420 CLAYTON RD
ST LOUIS, MO 63117

CHO, KYU S ORS
456 N NEW BALLAS
SUITE 369
ST LOUIS, MO 63141

CHO, SOO IL U
2601 N WHITTIER
ST LOUIS, MO 63113

CHOI, SAE R OS
157 SOUTH GRAESER RD
ST LOUIS, MO 63141

CHOU, YEN PING IM
ROBT KOCH HOSP
4101 KOCH RD
ST. LOUIS, MO 63129

CHUA, STEVEN IM
1125 GRAHAM ROAD
FLORISSANT, MO 63031

CHUNG, KAP-EUN GS
205 WEST MAIN
FREDERICKTOWN, MO 63645

CHUSAK, RICHARD B PS
2B21 N BALLAS RD STE C-
ST LOUIS, MO 63131

CIAPCIAK, STANLEY J GP
1502 ST LOUIS AVE
ST LOUIS, MO 63106

CLARK, RICHARD E US
49B9 BARNES HOSP PLAZA
SUITE 310B QUEENY TO
ST LOUIS, MO 63110

CLASEMAN, WILMA W PH
3237 LONGFELLOW BLVD
ST LOUIS, MO 63104

CLAYCOMB, GERALD K DR
5535 DELMAR BLVD
ST LOUIS, MO 63112

CLAYTON, JILL M AN
47 CLERMONT LANE
ST LOUIS, MO 63124

CLENDENIN, WILLIAM W P
1034 S BRENTWOOD
ST LOUIS, MO 63141

COBB, MILTON L AN
BARNES HOSP PLAZA
ST LOUIS, MO 63110

COBEN, LAWRENCE A N
660 S EUCLID BOX B111
ST LOUIS, MO 63110

CODILLA, SOSTENES G GS
1610 CAMP JACKSON RD
CAHOKIA, IL 62206

COHEN, EDWARD R
4511 FOREST PARK
ST LOUIS, MO 6310B

COHEN, FRANK IM
300 S GRAND
ST LOUIS, MO 63103

COHEN, HILLARD K IM
500 NORTHWEST PLAZA STE
ST ANN, MO 63074

COHEN, ROBERT S OBG
2B21 BALLAS RD STE 255
ST LOUIS, MO 63131

COKRHAME, JACK IM
1125 GRAHAM RD
FLORISSANT, MO 63031

COLE, HARRY O NS
5505 DELMAR BLVD
ST LOUIS, MO 63112

COLLINS, JOHN M US
692B HAMPTON AVE
ST LOUIS, MO 63109

COLOSI, NICHOLAS J OPH
14769 GREENLOCH CT.
CHESTERFIELD, MO 63017

COMAS, MANUEL R OBG
514 TENBY TERR
MANCHESTER, MO 63011

COMENS, PHILLIP IM
6651 CHIPPEWA
ST LOUIS, MO 63109

COMENS, RUTH C AN
BB26 WOODFOX
ST LOUIS, MO 63127

CONE, ALFRED J OTO
635 WOOD MILLS RD S
CHESTERFIELD, MO 63D17

CONNORS, JOHN P GP
216 S KINGSHIGHWAY
ST LOUIS, MO 63110

CONOYER, J M OTO
733 LOCKETT ROAD
ST LOUIS, MO 63122

CONRAD, MARSHALL B ORS
1D0 N EUCLID AVE
ST LOUIS, MO 6310B

CONVERY, PAUL B IM
3915 WATSON
ST LOUIS, MO 63139

COOK, MARVIN R
10D10 KENNERLY RD
ST LOUIS, MO 6312B

COOPER, JAMES F GS
12255 DEPAUL DR
SUITE B30
BRIDGETON, MO 63044

COOPER, THEODORE CD
DEAN CORNELL UNIV MED C
1300 YORK AVE
NEW YORK, NY 10021

COOPER, THOMAS J PTH
10010 KENNERLY
ST LOUIS, MO 6312B

COOPER, THOS P OS
970 EXECUTIVE PARKWAY
SUITE 101
ST LOUIS, MO 63141

COPP, RALPH IM
49B9 BARNES QUEENY TOWE
ST LOUIS, MO 63110

CORDAY, ROBT J CHP
111 S. MERAMEC
ST LOUIS, MO 63105

CORDONNIER, JUSTIN J U
777B CROSS CREEK DR
ST LOUIS, MO 63141

CORONADO, MARIO A OBG
10004 KENNERLY RD
ST LOUIS, MO 6312B

CORRIGAN, GILBERT E PTH
915 N GRAND
ST LOUIS, MO 63106

CORRY, JAMES M PDA
4989 BARNES HOSP. PLAZA
ST. LOUIS, MO 63110

CORVALAN, JUAN C P
SUITE 1180
1034 SOUTH BRENTWOOD
ST LOUIS, MO 63117

CORWIN, KENNETH D PS
777 S NEW BALLAS RD STE
ST LOUIS, MO 63141

COSTA, DOMINIC V GS
1212 S GRAND AVE
ST LOUIS, MO 63104

COSTELLO, CYRIL J GE
621 S NEW 8ALLAS RD
ST LOUIS, MO 63141

COSTELLO, JOS P IM
950 FRANCIS PL
ST LOUIS, MO 63105

COSTEN, WILLIAM S ORS
777 S NEW 8ALLAS RD
ST LOUIS, MO 63141

COSTRINO, JOS A OM
12567 CONWAY RD
ST LOUIS, MO 63141

COWDRY, EDMUND V N
700 BILTMORE AVE APT 11
ASHEVILLE, NC 28803

COX, MARY E P
1034 S BRENTWOOD
ST LOUIS, MO 63117

COXE, WM S NS
BARNES HOSP PLAZA
ST LOUIS, MO 63110

COZART, DUANE E IM
4910 FOREST PARK
ST LOUIS, MO 63108

CRADOCK, THOMAS V GS
1401 SOUTH GRAND
ST LOUIS, MO 63104

CRAFTS, DAVID NS
1325 S GRAND
ST LOUIS, MO 63104

CRAIG, ALAN G P
1035 BELLEVUE STE 202
ST LOUIS, MO 63117

CRALLE, ROBERT V GS
12255 DE PAUL DR SUITE
BRIDGETON, MO 63044

CRAWFORD-TROTTER, KATH J GP
35 N CENTRAL
ST LOUIS, MO 63105

CRESPIN, STEPHEN R IM
4 MC KNIGHT LANE
ST LOUIS, MO 63124

CRESPO, HORACIO T OS
245 LITCHFORD CT
ST LOUIS, MO 63141

CRESPO, REMEDIOS R OS
245 LITCHFORD CT
ST LOUIS, MO 63141

CRISCIONE, JAMES R TS
4273 FLORA PLACE
ST LOUIS, MO 63110

CRISCIONE, JAMES S AN
1837 GRASSY RIDGE
KIRKWOOD, MO 63122

CROSSMAN, ROBT W IM
1509 HOLLY DR
WEBSTER GROVES, MO 63119

CROWELL, HUGH C IM
9764 TESSON FERRY RD
ST LOUIS, MO 63123

CRUZ, ELIGIO C OBG
2821 N BALLAS RD
ST LOUIS, MO 63131

CUBILLO, ENRIQUE DR
730 MIDDLE POLO DR
ST LOUIS, MO 63105

CUENTO, OBLENDO A GS
12166 BIG BEND RD-STE 3
KIRKWOOD, MO 63122

CULLUM, ALBERT G OTO
MED ARTS BLDG
MIDDLESBORO, KY 40965

CUNNINGHAM, EDWIN J IM
164 W CLAYTON RD
BALLWIN, MO 63011

CUSUMANO, JOSEPH V US
36 LYNNBROOK RD.
ST. LOUIS, MO 63131

CUTLER, GORDON B JR IM
3410 TURNER LANE
WASHINGTON, DC 20015

CUTLER, HAROLD M OTO
141 N MERAMEC
ST LOUIS, MO 63105

CUTLER, HARRY U
4511 FOREST PARK BLVD
ST LOUIS, MO 63108

CZEBRINSKI, EDWARD W IM
3555 SUNSET OFFICE DR
ST LOUIS, MO 63127

DAAKE, JOHN W GS
48 PORTLAND PL
ST LOUIS, MO 63108

DAAKE, JOHN W US
2288 CRESTROYAL
ST LOUIS, MO 63131

DAGARTZIKAS, A K OBG
12902 TUNDRA
TOWN & COUNTRY, MO 63131

DAHM, CHAS H OBG
1009 JULLANA DR
BALLWIN, MO 63011

DALTON, ARTHUR R GS
35 N CENTRAL AVE
CLAYTON, MO 63105

DAMES, RICHARD J IM
15 YORK DR
ST LOUIS, MO 63117

DANFORTH, WM H OS
WASHINGTON UNIVERSITY
ST LOUIS, MO 63130

DANGANAN, CANDIDO S AN
2206 VIEWROYAL DR
ST LOUIS, MO 63131

DANGANAN, ELEANA Q AN
2206 VIEW ROYAL
ST LOUIS, MO 63131

DANIELS, JOHN S IM
1441 CHANDELLAY CT.
ST. LOUIS, MO 63141

DANIS, PETER G PD
2821 N 8ALLAS RD
ST LOUIS, MO 63131

DANIS, RICHARD K GS
1401 S GRAND
ST LOUIS, MO 63104

DANKNER, ARNOLD IM
1010 COLLINGWOOD
ST LOUIS, MO 63132

DAS, ARABINDA N
20 SOUTH THIRD
BELLEVILLE, IL 62221

DASH, IRA AN
6500 CHIPPEWA
ST LOUIS, MO 63109

DASH, UDAYA N ORS
6500 CHIPPEWA ST
ST LOUIS, MO 63109

DATUIN, ALEJANDRO M P
1420 GRATTAN
ST LOUIS, MO 63104

DAUM, WAYNE J IM
6461 DEVONSHIRE AVE
ST LOUIS, MO 63109

DAVIDSON, MORRIS OTO
35 N CENTRAL AVE
CLAYTON, MO 63105

DAVIS, CHARLES L OBG
6919 GROVELAND
ST LOUIS, MO 63121

DAVIS, GENE L DR
11133 DUNN RD
ST LOUIS, MO 63136

DAVIS, MARTIN W IM
911 S BRENTWOOD 8LVD
CLAYTON, MO 63105

DAVIS, MARY A P
456 N NEW BALLAS RD STE
ST LOUIS, MO 63141

DAVIS, SHELDON OTO
11155 DUNN RD
ST LOUIS, MO 63136

DE CASTRO, EDWINO T AN
3933 SOUTH BROADWAY
ST LOUIS, MO 63118

DE JESUS CARBONEL, A AN
615 S NEW BALLAS RD
ST LOUIS, MO 63141

DE LEON, ROMUALDO V IM
525 JEFFCO BLVD
ARNOLD, MO 63010

DE UNGRIA, ESTELITA G PD
2601 N WHITTIER ST
ST LOUIS, MO 63113

DE UNGRIA, PABLO C OBG
6744 CLAYTON ROAD
ST LOUIS, MO 63117

DE VERA, ANSON E AN
5085 REYNOSA DR
ST LOUIS, MO 63128

DE VIVO, DARRYL C N
710 WEST 168TH ST.
NEW YORK, NY 10032

DEAKIN, V R U
4530 W PINE APT 201
ST LOUIS, MO 63108

DEBNAM, JAMES W R
391 MADEWOOD LANE
CHESTERFIELD, MO 63017

DEETHS, TONY M DR
135 LADUEMONT DR
CREVE COEUR, MO 63141

DEHNER, JONATHAN D R
26 LORENZO LANE-LA DUE
ST LOUIS, MO 63124

DEITCHMAN, ROBT B P
141 N MERAMEC AVE
CLAYTON, MO 63105

DEL CARMEN, JAIME J PTH
46 WORTHINGTON DR
MARYLAND HEIGHT, MO 63043

DEL ROSARIO, HORACIO O OM
3809 UNION BLVD
ST LOUIS, MO 63104

DEL VALLE, FERNANDO P
777 S NEW BALLAS STE W
ST LOUIS, MO 63141

DELCAU, CAREY M GP
3535 S JEFFERSON
ST LOUIS, MO 63118

DENES, BELA U
RT 3 BOX 220
HIGH RIDGE, MO 63049

DENK, ALAN F GS
1035 BELLEVUE AVE
ST LOUIS, MO 63117

DENNISON, CARL F GP
5471 DR MARTIN LUTHER K
ST LOUIS, MO 63112

DESHPANDE, V IM
716 HANLEY INDUSTRIAL CT.
ST. LOUIS, MO 63144

DESTOUET, JUDY US
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110

DEUTCH, MAX PD
29 WILLOW HILL RD
ST LOUIS, MO 63124

DEVINE, JOHN B PUD
85 WILLMORE RD
ST LOUIS, MO 63109

DEW, THOS A PUD
5505 DELMAR
ST LOUIS, MO 63112

DEWALD, PAUL A P
4524 FOREST PARK BLVD
ST LOUIS, MO 63108

DEWEIN, EDWARD G P
621 S NEW BALLAS RD RM
ST LOUIS, MO 63141

DEZA, PLARIDEL P
1420 GRATTAN
ST LOUIS, MO 63141

DI LEO, SENATRO W OBG
1245 GRAHAM ROAD
FLORISSANT, MO 63031

DI PASCO, DONALD J IM
51 MAGNOLIA DR
ST LOUIS, MO 63124

DICK, EARL P
7314 FOREST HAVEN ESTATES
ST LOUIS, MO 63123

DICKLER, DONALD J AN
833 AUDUBON DR
ST LOUIS, MO 63105

DIEHR, MAURICE A GS
1530 BEDFORD CT
APT 14
CHESTERFIELD, MO 63017

DIEMER, PETER A R
12302 IRONSTONE
ST LOUIS, MO 63131

DIERBERG, DALE F DR
511 CROSS GREEN LANE
ST LOUIS, MO 63141

DIESTELHORST, JAMES A IM
14377 WOODLAKE DR
CHESTERFIELD, MO 63017

DILLARD, BURL M GS
12166 BIG BEND RD-STE 3
ST LOUIS, MO 63122

DMYTRYK, EUGENE T GS
621 S NEW BALLAS RD
ST LOUIS, MO 63141

DODGE, PHILIP R N
DEPT OF PEDIATRICS WASH
500 S KINGSHIGHWAY
ST LOUIS, MO 63178

DOISY, PHILIP P IM
325 N KIRKWOOD RD
KIRKWOOD, MO 63122

DOISY, ROBT A IM
126 E. JEFFERSON AVE.
ST. LOUIS, MO 63122

DOLAN, JOHN T GS
3915 WATSON RD
ST LOUIS, MO 63109

DOMOND, LHERISSON OBG
P O BOX 1128
FRANKLIN, LA 70538

DONAHOE, JAMES L PD
901 CLAYTON
BALLWIN, MO 63011

DONALDSON, ROBT C PS
VET ADMIN HOSP
ST LOUIS, MO 63125

DONATI, ROBT M R
VET ADMIN HOSP NUCL MED
ST LOUIS, MO 63106

DONLEY, LEO F OM
2425 N BROADWAY
ST LOUIS, MO 63102

DONOVAN, JOHN F GS
1035 BELLEVUE
ST LOUIS, MO 63117

DONOVAN, THOS J OTO
1014 ACCENT DR
ST LOUIS, MO 63141

DOOLEY, JOS M N
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110

DORTON, ROBT K IM
911 S BRENTWOOD BLVD
ST LOUIS, MO 63105

DOUCETTE, RAYMOND C OBG
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117

DOUGHERTY, CHARLES H PD
3535 S JEFFERSON AVE
ST LOUIS, MO 6311B

DOWELL, GEO H P
2821 N BALLAS RD
ST LOUIS, MO 63131

DOYLE, CHAS R GS
1035 BELLEVUE
ST LOUIS, MO 63117

DRACE, CHAS C GS
19 E LOCKWOOO AVE
ST LOUIS, MO 63119

ORAKE, WM L PTH
MISSOURI BAPTIST HOSP
3015 N BALLAS RO
ST LOUIS, MO 63131

DRATLER, STANLEY OBG
7225 CLAYTON RO
CLAYTON, MO 63105

ORESCHER, EMMETT B OM
35 N CENTRAL
ST LOUIS, MO 63105

DREWS, ROBT C OPH
211 N MERAMEC
ST LOUIS, MO 63105

REY, NORMAN W IM
950 FRANCIS PL STE 205
CLAYTON, MO 63105

REYER, CARL J OBG
45 GLEN ROAD
WEBSTER GROVES, MO 63119

ROZOA, JOSEPH CO
12255 OEPAUL DR.
BRIOGETON, MO 63044

RUCK, NORMAN S OTO
4949 FOREST PARK
ST LOUIS, MO 63108

UBUQUE, THEOOORE J GS
1035 BELLEVUE
ST LOUIS, MO 63117

UEMLER, ROBT H OBG
12166 BIG BENO BLVO
KIRKWOOD, MO 63122

UFFY, FRANCIS G AN
8116 UNIVERSITY DR
ST LOUIS, MO 63105

UGGAN, JOHN J OBG
10805 SUNSET OFFICE DR
ST LOUIS, MO 63127

UMAOAG, VIRGILIO P PTH
3015 N BALLAS RO
ST LOUIS, MO 63131

UREL, JUSTIN H OBG
1325 S GRANO
ST. LOUIS, MO 63104

DURR, JON W PTH
2821 N BALLAS RO
ST LOUIS, MO 63131

DWORKIN, SAUL GP
4632 S GRANO
ST LOUIS, MO 63111

OYER, OALLAS J IM
3915 WATSON RO
ST LOUIS, MO 63109

DZUNDZEV, PENCO T GP
3601 S JEFFERSON AVE
ST LOUIS, MO 63118

ACHEMPATI, RAMA G IM
14377 WOOOLAKE OR.
CHESTERFIELO, MO 63017

ACHEMPATI, UMA R OBG
14377 WOOOLAKE OR
SUITE 315
CHESTERFIELO, MO 63017

ADES, DEE W GP
6 KINGSBURY PL
ST LOUIS, MO 63111

ADES, JOS W PS
4910 FOREST PARK
ST LOUIS, MO 63108

AGLETON, MARK O R
1148 WEIDMAN RD
MANCHESTER, MO 63011

ARP, RALPH K ORS
P O BOX 614
MEXICO, MO 65265

BEL, EUGENE H PD
11115 NEW HALLS FERRY
FLORISSANT, MO 63033

BERLE, VINCENT L OBG
141 N MERAMEC AVE
ST LOUIS, MO 63105

CK, BIRKLE IM
1819 CAMBERLY ROAO
ST LOUIS, MO 63131

CKER, OESIOER B GP
P O BOX 44B
PACIFIC, MO 63069

CKERT, CLARENCE T GS
2295 GULF OF MEXICO OR
LONGBOAT KEY, FL 3354B

DELE, EUGENE H GP
3B90 FEOERER PL
ST LOUIS, MO 63116

EDELMAN, ALAN H OR
2821 N BALLAS RD
ST LOUIS, MO 63131

EDWARDS, JAMES E CHP
522 N NEW BALLAS RD
ST LOUIS, MO 63141

EDWARDS, JOS C CD
49B9 BARNES HOSP PLAZA
ST LOUIS, MO 63110

EGAN, ROBT C GS
7820 CARONDELET AVE
ST LOUIS, MO 63105

EGAN, THOS F R
9852 NORTHBRIOGE
ST LOUIS, MO 63124

EGGLESTON, HARRY C OPH
621 S NEW BALLAS RD
ST LOUIS, MO 63141

EGGLESTON, THOS F OPH
621 S NEW BALLAS
ST LOUIS, MO 63141

EHRLICH, CARL F OTO
777 S NEW BALLAS RD
ST LOUIS, MO 63141

EIOELMAN, JACK R P
141 N MERAMEC
ST LOUIS, MO 63105

EIMER, CHAS E OTO
6 BEL AIR ORIVE
SIKESTON, MO 63B01

EISEN, ARTHUR Z O
BARNES HOSP PLAZA
ST LOUIS, MO 63110

EISENSTADT, MICHAEL L N
11155 OUNN RO
ST LOUIS, MO 63136

ELIASSON, SVEN G N
660 S EUCLIO
ST LOUIS, MO 63110

ELLER, CHAS H PH
250 E ALAMEOA
SANTA FE, NM 87501

ELLERSIECK, OOROTHY M GP
10437 EWELL
ST LOUIS, MO 63137

ELLIS, JEFFREY J R
8133 BRIARHAVEN TR APT
ST LOUIS, MO 63123

ELLSASSER, JAMES C ORS
1034 BRENTWOOD BLVO
ST LOUIS, MO 63117

ELSON, JULIUS CO
1245 GRAHAM RO
FLORISSANT, MO 63031

EMERAN, GEORGES J U
600 NORTH UNION
ST LOUIS, MO 63108

EMERSON, REYNOLOS L GP
1695 BRENTWOOD BLVD S
BRENTWOOO, MO 63144

EMERSON, WILLIAM A IM
11150 OUNN RD STE 105
ST LOUIS, MO 63136

EPSTEIN, JAMES M IM
114 N TAYLOR AVE
ST LOUIS, MO 63108

ERNST, EOWIN C R
14377 WOOOLAKE OR
SUITE 110
CHESTERFIELO, MO 63017

ERNST, JOS G IM
325 N KIRKWOOO RD
KIRKWOOO, MO 63122

ERNST, RICHARO E R
14377 WOOOLAKE DR
SUITE 110
CHESTERFIELO, MO 63017

ERNST, ROLANO P US
12327 CREEKHAVEN
ST LOUIS, MO 63131

ESCOBEOO, BOLIVAR M OBG
13975 MANCHESTER ROAO
MANCHESTER, MO 63011

ESCOFFERY, RICHARD F OPH
5103 QUEENY TOWERS
4989 BARNES HOSPITAL
ST LOUIS, MO 63110

ESSLINGER, ARTHUR T OBG
B16 IDLEWILD WAY
SIESTA KEY
SARASOTA, FL 33581

ESTES, JACK M OS
SUITE #4
493 RUE ST FRANCOIS
FLORISSANT, MO 63031

ESTRADA, CORAZON O IM
11155 DUNN RO
ROOM 104
ST LOUIS, MO 63136

ESTRAOA, JESUS I GP
1610 MASON VALLEY RD
ST LOUIS, MO 63131

ETHEREOGE, EDWARD E GS
WASH UNIV OEPT SURG
ST LOUIS, MO 63110

ETIENNE, ROBT B IM
6000 WESTMINSTER
ST LOUIS, MO 63112

ETO, JACKSON K PD
6651 CHIPPEWA ST
ST LOUIS, MO 63109

EVANS, LAWRENCE G ORS
1325 S GRAND
ST LOUIS, MO 63104

EVENS, RONALD G R
510 S KINGSHIGHWAY
ST LOUIS, MO 63110

EVERSOLL, NORTON J OS
1455 TYLER ST
HOLLYWOOD, FL 33020

EXARHOU, KLARK GS
777 S NEW BALLAS ROAD
ST LOUIS, MO 63141

EYERMAN, EDWARO L N
1035 BELLEVUE AVE
ST LOUIS, MO 63117

FABIAN, LEONARD W AN
660 S EUCLID
ST LOUIS, MO 63110

FABITO, DANIEL C GS
120 PROGRESS PKWY
HAZELWOOD, MO 63043

FABITO, MELINDA A IM
22 OREYER DR
EUREKA, MO 63025

FAIR, WM R U
4960 AUDUBON
ST LOUIS, MO 63110

FAJATIN, ROMULO J IM
10010 HWY K
O'FALLON, MO 63366

FALLON, RICHARD H GS
49B9 BARNES HOSP PLAZA
ST LOUIS, MO 63110

FARBERMAN, ELLIOTT PD
437 FALAISE OR
CREVE COEUR, MO 63141

FARRELL, JOHN S IM
915 WYN HAVEN
BALLWIN, MO 63011

FARRELL, ROBT J IM
9060 SARANAC DR
ST LOUIS, MO 63117

FARZANA, FARIOA US
6 WEOGEWOOO LN
ST LOUIS, MO 63141

FATHMAN, ANTHONY E U
777 S NEW BALLAS ROAO
ST LOUIS, MO 63141

FEIBEL, ROBT M OPH
1034 S BRENTWOOO BLVO
ST LOUIS, MO 63117

FELDMAN, OAVID IM
11501 LAKESHORE DR
ST LOUIS, MO 63141

FELICIANO, WILFRIOO C PS
1245 GRAHAM RO
FLORISSANT, MO 63031

FELIX, ROBT H P
10501 INOIAN WELLS DR
SUN CITY, AZ 85351

FELLER, HAROLO H GP
NORTHLANO MO BLO ST 201
ST LOUIS, MO 63136

FELLHAUER, CARL M ORS
1035 BELLEVUE
RICHMOND HEIGHT, MO 63117

FELTS, JAMES A AN
45 BERRY RO PARK
ST LOUIS, MO 63122

FERGUSON, THOS B TS
49B9 BARNES HOSP PLAZA
ST LOUIS, MO 63110

FERRENDELLI, JAMES A OS
660 S EUCLID
ST LOUIS, MO 63110

FERRO, ANTHONY L P
90 OLO FARMHOUSE
ST CHARLES, MO 63301

FERRY, RICHARO J N
141 MERAMEC ST
CLAYTON, MO 63105

FETICK, PAUL G GP
12660 LAMPLIGHTER SQUAR
ST LOUIS, MO 63128

FEUTZ, EOWARD P R
19 RIOGEMOOR OR
ST LOUIS, MO 63105

FIGUEROA, EOOUYN CHP
522 NORTH NEW BALLAS RO
ST LOUIS, MO 63141

FIGUEROA, ELISEO O IM
11155 OUNN RO
ST LOUIS, MO 63136

FINGER, OONALD H IM
522 N NEW BALLAS RO
ST LOUIS, MO 63141

FINGERHOOO, MARVIN G IM
1195 CIMARON OR
ST LOUIS, MO 63132

FINGERT, HYMAN H P
100 N EUCLIO
ST LOUIS, MO 63108

FINK, LE R GS
11155 DUNN RD STE 206
ST LOUIS, MO 63136

FINKEL, BARNEY W GP
650B W FLORISSANT
ST LOUIS, MO 63136
FINN, MURRAY E P
1035 BELLEVUE STE 202
ST LOUIS, MO 63117
FINNEGAN, JOS V IM
1035 BELLEVUE ST
ST LOUIS, MO 63117
FIORDELISI, ROCCO J GS
700 HAVERFORD RD
ST LOUIS, MO 63124
FISCHER, JOHN R P
12255 DE PAUL DR
BRIDGETON, MO 63044
FISH, RICHARD G OPH
4370 FOREST DE VILLE DR
ST LOUIS, MO 63129
FISH, VIRGIL O GS
2500 TOWN & COUNTRY LAN
ST LOUIS, MO 63131
FISHER, LINDA IM
5505 DELMAR SUITE 503
ST LOUIS, MO 63112
FISHMAN, JOHN J AN
3015 N BALLAS RD
ST LOUIS, MO 63131
FISHMAN, MARVIN A N
P O BOX 14871
ST LOUIS, MO 63178
FITCH, COY D IM
1325 S GRAND BLVD
ST LOUIS, MO 63104
FITZGERALD, LEO P OBG
7219 CORNELL AVE
ST LOUIS, MO 63130
FITZGERALD, WM T IM
3915 WATSON RD
ST LOUIS, MO 63109
FIVIAN, GERALD J OPH
2B21 N BALLAS RD
ST LOUIS, MO 63131
FLANCE, ISRAEL J PUO
4652 MARYLAND
ST LOUIS, MO 63108
FLANIGAN, GEO D OBG
2827 LAWTON PROMENADE
ST LOUIS, MO 63103
FLEISHMAN, ALFRED IM
1035B CHIMNEY ROCK
ST LOUIS, MO 63141
FLETES, JAMES W GP
7270 NATURAL BRIDGE AVE
ST LOUIS, MO 63121
FLORES-VEGA, CARLOS H IM
3915 WATSON RD
ST LOUIS, MO 63109
FLORO, MARIANO N GS
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033
FLOTTE, BERNARO H IM
6 LILA LANE
FLORISSANT, MO 63033
FLOTTE, SYLVESTER A IM
466 RUNNYMEOE DR
ST LOUIS, MO 63141
FLUG, ERIC J US
12166 BIG BENO BLVO
ST LOUIS, MO 63122
FLYNN, EOWARO P IM
9730 E WATSON RO
ST LOUIS, MO 63126
FLYNN, JOHN T CO
3211 S GRANO BLVD
ST LOUIS, MO 63118
FLYNN, JOS E GS
621 S NEW BALLAS
ST LOUIS, MO 63141
FLYNN, THOMAS T P
10007 KENNERLY ROAD
ST LOUIS, MO 63128
FOGARTY, WM M IM
3915 WATSON RD
ST LOUIS, MO 63109
FORD, LEE T ORS
4910 FOREST PARK AVE
ST LOUIS, MO 6310B
FORO, THOMAS E OPH
807 STAOIUM
COLUMBIA, MO 65201
FORSEN, JAMES A OS
GOWER, MO 64454
FORSMAN, WALDO W GP
9436 GRAVOIS
ST LOUIS, MO 63123
FORSYTH, BRUCE T IM
100 N EUCLID
ST LOUIS, MO 63108
FORTI, JOHN J GP
1434 CHAMBERS
ST LOUIS, MO 63135
FOX, LEON J ORS
4511 FORES PARK AVE
ST LOUIS, MO 63108
FOX, ROBT E IM
6744 CLAYTON RD
ST LOUIS, MO 63117
FRANCISCO, OOMINIC S US
777 S NEW BALLAS RO
ST LOUIS, MO 63141

FRANK, ALVIN R P
7457 CROMWELL DR
ST LOUIS, MO 63105
FRANKLIN, HAROLD A CD
16 HAMPTON VILLAGE PLAZ
ST LOUIS, MO 63109
FRANKLIN, MAX S CD
1040 NORTH MASON ROAD
ST LOUIS, MO 63141
FRASER, DANL M TS
1035 BELLEVUE AVE
ST LOUIS, MO 63117
FRAWLEY, THOS F IM
12255 DE PAUL DR
SUITE 865
BRIDGETON, MO 63044
FREDERICK, RAYMOND O GS
55 RIDGEMOOR DR
CLAYTON, MO 63105
FREEDMAN, RUTH S OPH
10287 CLAYTON ROAD
ST LOUIS, MO 63124
FREEMAN, DAVID M OPH
7316 KINGSBURY
ST LOUIS, MO 63105
FREEMAN, RICHARD OTO
BARNES HOSP PLAZA
ST LOUIS, MO 63110
FREIMAN, SEYMOUR M OBG
1034 S. BRENTWOOD #616
ST LOUIS, MO 63117
FREUND, SAML J CRS
B515 DELMAR
ST LOUIS, MO 63124
FRIEDMAN, IRA J PD
2428 WOODSON RD
OVERLAND, MO 63114
FRIEDMAN, PAUL L AN
7332 CORNELL
ST LOUIS, MO 63130
FRIEOMAN, ROBT H PD
2B21 N BALLAS RD
ST LOUIS, MO 63131
FRIEDMAN, WILLIAM H OTO
1325 SOUTH GRAND BLVD.
2ND FLOOR
ST. LOUIS, MO 63104
FRIEDRICH, ANTHONY P OS
12303 DEPAUL DR
HAZELWOOD, MO 63044
FRIEDRICH, ERNST R OBG
4911 BARNES HOSP PLAZA
ST LOUIS, MO 63110
FRIES, ARMAND D OTO
11 W GEYER LN
ST LOUIS, MO 63131
FRIES, JOHN W R
10010 KENNERLY ROAO
ST LOUIS, MO 63128
FRISKEL, ARTHUR K IM
7500 OEVONSHIRE
ST LOUIS, MO 63119
FROELICH, EDWIN J GP
RT 7
LEBANON, MO 65536
FRUMSON, GUY H ORS
12255 OE PAUL OR
BRIOGETON, MO 63044
FRYER, MINOT P PS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
FUJITA, MILTON T CHP
12161 POINT OAK RO
ST LOUIS, MO 63131
FULEIHAN, FARIO M U
615 S NEW BALLAS
ST LOUIS, MO 63141
FUNSCH, ROBERT E ORS
6744 CLAYTON RO
ST LOUIS, MO 63117
FURLA, GUS J GP
57 BROAOVIEW DR
ST LOUIS, MO 63105
FURLOW, LEONARD T NS
RTE 1 BOX 1240
CRYSTAL RIVER, FL 32629
GAFFNEY, CALDWELL J GS
4959 NORTHLANO PLACE
ST LOUIS, MO 63113
GAFNEY, GEO T GS
ST AGNES HOME
MANCHESTER & WOOOLAWN
ST LOUIS, MO 63122
GAGLIAROO, JOSEPH P
141 N MERAMEC RM 303
CLAYTON, MO 63105
GALAKATOS, ANOREW E US
777 S NEW BALLAS ROAO
ST LOUIS, MO 63141
GALAN, ALEJANDRO A GS
2350 SANDRA SUE DR
ST LOUIS, MO 63114
GALE, ARTHUR H IM
2428 WOOOSON RD
OVERLAND, MO 63114
GALL, ALAN M OTO
4989 BARNES HOSPITAL PL
ST LOUIS, MO 63110

GALL, IRA C OBG
777 S NEW BALLAS RD
ST LOUIS, MO 63141
GANDLMAYR, JACOB M GP
1040 N MASON RD
ST LOUIS, MO 63141
GANSLOSER, WILBERT M P
950 FRANICS PL
CLAYTON, MO 63105
GANTNER, GEO E PTH
1325 S GRAND BLVD
ST LOUIS, MO 63104
GANTZ, JOHN A R
10 MUIRFIELD LANE
ST LOUIS, MO 63141
GARAS, GAMAL AN
2109 CEDAR ROYAL DR
ST LOUIS, MO 63131
GARCIA-FERRER, EDUARDO A P
1420 GRATTAN
ST LOUIS, MO 63104
GARFINKEL, BERNARD T IM
522 N NEW BALLAS RD
ST LOUIS, MO 63141
GARRIGA, FRANCISCO J IM
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033
GAVINI, RAJENDRA R GS
1827 S 39TH ST.
ST LOUIS, MO 63110
GEARHART, DAVID L OBG
456 NO NEW BALLAS RD
ST LOUIS, MO 63141
GEARHART, WILBUR H P
2821 N BALLAS RD STE 16
ST LOUIS, MO 63131
GEDNEY, WM B IM
806 MERAMEC STATION RO
VALLEY PARK, MO 630BB
GEISE, AUGUST W NS
5505 DELMAR
ST LOUIS, MO 63112
GEISSE, GUILLERMO R
DEPT OF RADIOLOGY
6150 OAKLAND
ST LOUIS, MO 63139
GELLMAN, ELLIOT F PD
456 N NEW BALLAS RD
ST LOUIS, MO 63141
GENTSCH, KENNETH W CD
114 N TAYLOR
ST LOUIS, MO 63108
GEORGE, PHILIP G ORS
1034 S BRENTWOOD BLVO
ST LOUIS, MO 63105
GERMUTH, FREDERICK G PTH
615 S NEW BALLAS RD
ST LOUIS, MO 63141
GEROWIN, LANCE GS
940B W MILTON
ST LOUIS, MO 63114
GERST, ALOYSIUS C PD
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033
GERST, JAMES PD
11115 NEW HALLS FERRY RD
FLORISSANT, MO 63033
GHOSH, NELLIE CD
114 N TAYLOR AVE
ST. LOUIS, MO 63108
GIBSTINE, MARVIN H PD
34 LADUE ESTS
CREVE COEUR, MO 63141
GIESELMAN, RALPH V IM
4910 FOREST PARK BLVD
ST LOUIS, MO 63108
GILDEN, JEROME J ORS
456 N. NEW BALLAS RO.
SUITE 369
ST LOUIS, MO 63141
GILPIN, OORIS C CHP
7452 AMHERST AVE
ST LOUIS, MO 63130
GILULA, LOUIS A DR
250 OIELMAN RO
ST LOUIS, MO 63124
GINSBURG, JOROAN H ORS
456 N NEW BALLAS ROAD
SUITE 369
ST LOUIS, MO 63141
GINTHER, JAMES W JR IM
6420 CLAYTON
ST. LOUIS, MO 63117
GIRAPARNONT, BANG-ORN OBG
CHRISTIAN HOSP NORTHWES
1225 GRAHAM RD
FLORISSANT, MO 63031
GIRAPARNONT, PRABHAK OS
12845 GLENBERNIE
ST LOUIS, MO 63141
GLADNEY, JOHN H OTO
100 N EUCLID AVE-STE 70
ST LOUIS, MO 63108
GLINES, MICHAEL H PD
12 MERAMEC HGTS SHOPPIN
ARNOLO, MO 63010
GLUCK, OSCAR S IM
BARNES HOSP PLAZA
ST LOUIS, MO 63110

GNADE, ALBERT J GS
3606 GRAVOIS AVE
ST LDUIS, MO 63116
GDEBEL, JDAN M AN
5128 JAMIESON
ST LOUIS, MO 63119
GOELL, ROBT S OBG
100 N EUCLID
ST LOUIS, MD 63108
GDLD, JONATHAN A NS
12255 DE PAUL DRIVE
SUITE 830
8RIDGETON, MD 63044
GDLDFARB, ALVIN GS
514 COEUR DE RDYALE DR
#405
ST LDUIS, MO 63141
GDLDGABER, ALBERTO IM
1034 S BRENTWOOD
ST LDUIS, MO 63117
GOLDMAN, ARNOLD M IM
522 N NEW 8ALLAS RD
ST LOUIS, MO 63141
GDLDMAN, GORDDN M OBG
I125 GRAHAM RD
FLORISSANT, MD 6303I
GOLDMAN, HYMEN J D
4511 FOREST PARK
ST LOUIS, MO 63108
GOLDMAN, JACK IM
701 MANCHESTER RD.
MANCHESTER, MO 6301I
GOLDMAN, MELVIN L IM
8631 DELMAR
ST LOUIS, MO 63124
GOLDRING, DAVID PDC
500 S KINGSHIGHWAY
ST LOUIS, MO 63110
GOLDRING, SIDNEY NS
660 S EUCLID
ST LOUIS, MO 63110
GOLDSTEIN, BENJAMIN IM
2428 WOODSON RO
ST LOUIS, MO 63114
GOLLUB, SAML W PD
539 COEUR OE ROYALE
ST LOUIS, MO 63141
GOLTSCHMAN, JOHN P OPH
14377 WOODLAKE DR
CHESTERFIELD, MO 63017
GOMEZ, CESAR A GS
777 S NEW BALLAS
SUITE 117E
ST LOUIS, MO 63141
GOODMAN, JONATHAN N GP
245 UNION BLVD
ST LOUIS, MO 63108
GOODMAN, NATHANIEL GP
#9 SCARSDALE LANE
ST LOUIS, MO 63117
GORDON, JAMES M OPH
11155 DUNN RD
ST LOUIS, MO 63136
GORLA, WAYNE O IM
27 HARNEYWOLD
ST LOUIS, MO 63136
GOWLER, DOUGLAS R CHP
3394 MCKELVEY RD
BRIDGETON, MO 63044
GRADY, RONALD K CD
2821 N BALLAS RD
ST LOUIS, MO 63131
GRAFF, RALPH J GS
P O BOX 14109
ST LOUIS, MO 63177
GRANETO, JOS A GP
5521 S BROADWAY
ST LOUIS, MO 63111
GRANT, JOHN M IM
114 N TAYLOR AVE
ST LOUIS, MO 63108
GRANT, NEVILLE IM
114 N TAYLOR
ST LOUIS, MO 63108
GRANT, SAML B OS
96 ABEROEEN PL
ST LOUIS, MO 63105
GRAUL, WALTER P ORS
12255 DE PAUL DR
BRIDGETON, MO 63044
GRAY, GARY J IM
911 S BRENTWOOD
ST LOUIS, MO 63105
GREBEL, CLEMENT B IM
16 HAMPTON VILLAGE
ST LOUIS, MO 63109
GREEN, MANUEL E D
19370 COLLINS AVE
BLOG C APT 504
MIAMI BEACH, FL 33160
GREEN, MORTON R OPH
111 W. LINCOLN
BELLEVILLE, IL 62221
REEN, WM R GP
7200 MANCHESTER
ST LOUIS, MO 63143
REENMAN, MARSHALL B PO
777 S NEW BALLAS RD
ST LOUIS, MO 63141

GREGORY, JOHN G U
1325 S GRAND
ST LDUIS, MD 63104
GRESICK, ROBT J PTH
11 COACH-N-FOUR
ST LOUIS, MO 63131
GRIEGE, CHAS W CD
493 ST FRANCDIS
FLORISSANT, MD 63031
GRIGGS, JAMES Y GS
7820 CARONDELET
ST LDUIS, MO 63105
GRINDON, JOS B D
1035 BELLEVUE AVE
RICHMDND HEIGHT, MD 63117
GRU8B, RDBT L NS
BARNES HOSP NEUROSURGER
ST LOUIS, MO 63110
GRUNDMANN, WM H ORS
141 N MERAMEC
ST LDUIS, MO 63105
GUILLEN, DIOSDAOA T PD
2601 N WHITTIER
ST LOUIS, MO 63113
GUILLEN, RODDLFO T IM
3654 SOUTH GRAND BLVD
ST LOUIS, MO 63118
GULICK, C R OBG
1034 S BRENTWOOD
ST LOUIS, MO 63117
GULICK, CHARLES R OBG
I034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
GUMMELS, BELMONT B GP
718 FLORENCE AVE
ST LOUIS, MO 63119
GUNAWARDHANA, H P P
2100 MADISON
GRANITE CITY, IL 62040
GUNN, ROBERT W OPH
2601 NORTH WHITTIER
ST LOUIS, MO 63113
GUNN, WALTER T US
4617 DAHILA AVE
ST LOUIS, MO 63116
GUPTA, JITENDRA K IM
1040 N MASON RD STE 107
ST LOUIS, MO 63141
GUPTA, NARAYAN C FP
6331 DEVONSHIRE
ST LOUIS, MO 63109
GURSAHANI, MAN MOHAN U
1034 S BRENTWOOD BLVD
STE 854
ST LOUIS, MO 63117
GUZE, SAML B P
4940 AUDUBON AVE
ST LOUIS, MO 63110
HABERT, EDWARD R R
10010 KENNERLY
ST LOUIS, MO 63128
HADDOCK, JAMES N P
777 S NEW BALLAS RD
ST LOUIS, MO 63141
HAFFNER, HEINZ E GS
4983 BARNES HOSP PLAZA
ST LOUIS, MO 63110
HAGAN, DANL J R
621 S NEW BALLAS RD
ST LOUIS, MO 63141
HAGEBUSCH, OMER E PTH
15201 OLIVE ST RD APT 3
CHESTERFIELO, MO 63017
HAGEMANN, PAUL O IM
141 N MERAMEC AVE
ST LOUIS, MO 63105
HAGEN, DUANE Q P
621 S NEW BALLAS RD
ST LOUIS, MO 63141
HALFORD, RICHARD PS
1040 N MASON RD STE 109
ST LOUIS, MO 63141
HALL, EUGENE W GP
116A S FLORISSANT RD
FERGUSON, MO 63135
HALL, LEE A OBG
35 N CENTRAL AVE
CLAYTON, MO 63105
HALL, PRESTON C GP
39 WOODCREST DR
ST LOUIS, MO 63124
HALL, ROBT A GP
43 WASHINGTON TR
ST LOUIS, MO 63112
HALL, WM K D
P O BOX 661
ST CHARLES, MO 63301
HALLAZGO, SANTIAGO Y GP
11140 MANCHESTER RD
ST LOUIS, MO 63122
HALLEY, R H U
11155 OUNN RD STE 214
ST LOUIS, MO 63136
HALLINGER, EARL S D
121 N BRENTWOOD
CLAYTON, MO 63105
HALLORAN, MARK J IM
621 S NEW BALLAS RD STE
ST LOUIS, MO 63141

HALVERSON, JOHN D GS
4960 AUDUBDN
ST LOUIS, MO 63110
HAMILTDN, CALDWELL K PD
11745 OLIVE ST RD
CREVE COEUR, MO 63141
HAMILTON, EUGENE G OBG
BELLEVUE BLDG
1035 BELLEVUE
ST LOUIS, MO 63117
HAMILTON, JOHN A O8G
1524 RENDERER DR
ST LOUIS, MO 63122
HAMILTON, THDMAS R ID
2205 E 5TH ST
DULUTH, MN 55812
HAMILTDN, WILLIAM P CD
615 S NEW BALLAS RDAD
ST LOUIS, MD 63141
HAMMOND, D W DRS
12166 BIG BEND RD
ST LOUIS, MO 63122
HAMMDND, DAVID T CD
114 N TAYLOR AVENUE
ST LOUIS, MO 63108
HAMPTDN, STANLEY F A
6744 CLAYTON ROAD
ST LOUIS, MO 63117
HANAWAY, JOS N
BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
HANES, LILY A TR
615 SOUTH NEW 8ALLAS RO
ST LOUIS, MO 63141
HANKIN, NORMAN M PD
4233 SULPHUR AVE
ST LOUIS, MO 63109
HANNA, FAYEZ A GP
3394 MC KELVEY
BRIDGETON, MO 63044
HANSEL, FRENCH K A
515 TIMBERWYCK
ST LOUIS, MO 63131
HANSER, THEODORE H US
3555 SUNSET OFFICE DR
ST LOUIS, MO 63127
HANSON, PAULL R AM
I111 WOODS MILL RD
BALLWIN, MO 63011
HANTMAN, STEPHEN L IM
I125 GRAHAM RD
FLORISSANT, MO 63031
HANTZ, OSCAR OTO
1125 GRAHAM RD
FLORISSANT, MO 63031
HARDIN, WM B N
2821 N BALLAS RD STE 12
ST LOUIS, MO 63131
HARDY, DAVID A U
9I1 S BRENTWOOD BLVD
ST LOUIS, MO 63105
HARDY, DAVID C R
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
HARDY, GUERDAN OTO
35 N CENTRAL AVE
CLAYTON, MO 63105
HARDY, PATRICK J IM
1125 GRAHMA RD
FLORISSANT, MO 63031
HARELL, ALEX ORS
8 MEDIC CTR 1040 MASON
ST LOUIS, MO 63141
HARFORD, CARL G IM
WASH U SCH MED-INT MED-
ST LOUIS, MO 63110
HARKINS, WM B OTO
7 KINGSBURY PL
ST LOUIS, MO 63112
HARPER, FLEMING B GS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
HARRISON, LEE B IM
44 RIDGEMOOR DR
CLAYTON, MO 63105
HARRISON, RICHARD L P
9705 WATSON RO
CRESTWOOD, MO 63126
HART, WILLIAM OPH
660 SOUTH EUCLID
ST LOUIS, MO 63110
HART, WILLIAM G PS
6815 SUNLIGHT
SAN ANTONIO, TX 78238
HARTMAN, PAUL T P
1D34 S BRENTWOOD BLVO
ST LOUIS, MO 63117
HARTNETT, THOS D P
11 S MERAMEC
ST LOUIS, MO 63105
HARTSTEIN, JACK OPH
8631 OELMAR BLVD
ST LOUIS, MO 63124
HARTWIG, JOHN A GP
12541 POSTGROVE DR
ST LOUIS, MO 63141
HARWELL, JAMES L PD
35 N CENTRAL
ST LOUIS, MO 63105

HASENMUELLER, JAMES J GS
10004 KENNERLY RD
SUITE 110
ST LOUIS, MO 63128

HATFALVI, BELA I AN
15 MIDDLESEX DR
ST LOUIS, MO 63144

HAUN, RONALD L PD
350 W COLUMBIA-SUITE 30
EVANSVILLE, IN 47710

HAWATMEH, IBRAHIM S U
1325 S GRAND
ST LOUIS, MO 63104

HAWK, BRAY O GS
16 HAMPTON VILLAGE
ST LOUIS, MO 63109

HAWKER, WM D OBG
77 WILLMORE RD
ST LOUIS, MO 63109

HAWKINS, GEO L NS
5505 DELMAR AVE
ST LOUIS, MO 63112

HAYEK, WESLEY E GS
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033

HAYNES, JAMES W PTH
135 W ADAMS
KIRKWOOD, MO 63122

HAZAN, JOSEPH OBG
2428 WOODSON
ST LOUIS, MO 63114

HEADRICK, JOHN A IM
11133 DUNN RD
ST LOUIS, MO 63136

HEGDE, KORGI V IM
3915 WATSON RD
ST LOUIS, MO 63109

HEINS, JAMES N IM
631 E MONROE
ST LOUIS, MO 63122

HELBING, EDWARD J OS
250 ALAMEDA #105
SANTA FE, NM 87501

HELLMAN, ROBERT AN
49B9 BARNES HOSPITAL PLAZA
DEPT. OF ANTHES.
ST. LOUIS, MO 63110

HELLWEG, RAYMOND W PD
3220 PARKER RD
FLORISSANT, MO 63033

HENDIN, AARON IM
3917 BRANNON
ST LOUIS, MO 63109

HENSCHEL, EUGENE V IM
55 BROADVIEW DR
ST LOUIS, MO 63105

HENSELMEIER, DALE M GP
615 S. NEW BALLAS RD.
ST. LOUIS, MO 63141

HER, KYU S PD
624 HAVERFORD RD
ST LOUIS, MO 63124

HERJANIC, MARIJAN P
1420 GRATTAN
ST LOUIS, MO 63104

HERMAN, MORRIS GP
3555 SUNSET OFFICE DR
ST LOUIS, MO 63127

HERNANDEZ, SALVADOR R ORS
6500 CHIPPEWA AVE
ST LOUIS, MO 63109

*HERRON, ROBERT T IM
1325 S GRAND
ST LOUIS, MO 63104

HERSHEY, FALLS B GS
621 S NEW BALLAS RD
ST LOUIS, MO 63141

HERTEL, RONALD C ORS
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63105

HERZOG, GODOFREDO M OBG
1125 GRAHAM RD
FLORISSANT, MO 63031

HESKER, ALBERT E R
2B21 N BALLAS RD STE C-
ST LOUIS, MO 63131

HEUSLER, ANTON F P
317 NORTHLAND MED BLDG
ST LOUIS, MO 63136

HEUTEL, LEE B OM
7200 MANCHESTER
ST LOUIS, MO 63143

HIATT, BARRY A P
111 SOUTH MERAMEC AVE
ST LOUIS, MO 63105

HIATT, H C IM
138 N MERAMEC
ST LOUIS, MO 63105

HICKEY, GLENN M OBG
103 N. TAYLOR
ST. LOUIS, MO 63122

HICKEY, JAMES L OBG
621 S NEW BALLAS RD
ST LOUIS, MO 63141

HICKS, ROBT S P
777 S NEW BALLAS RD STE
ST LOUIS, MO 63141

HIGGINS, PHILIP C OBG
1 CLAYCHESTER
ST LOUIS, MO 63131

HIGHTOWER, HARRY G P
4524 FOREST PARK
ST LOUIS, MO 63108

HILBERT, PAUL H GP
2905 CHEROKEE ST
ST LOUIS, MO 6311B

HILDRETH, HOWARD R OPH
15022 CLAYMOOR CT
CHESTERFIELD, MO 63017

HILL, XA C GP
4067 DR MARTIN LUTHER K
ST LOUIS, MO 63113

HILLMAN, RICHARD E PD
P. O. BOX 14B71
ST LOUIS, MO 6317B

HIRONIMUS, JOHN E D
6651 CHIPPEWA ST STE 20
ST LOUIS, MO 63109

HIRSCH, JOHN D GS
216 S KINGSHIGHWAY
ST LOUIS, MO 63110

HOBBS, JOHN E OBG
WOODCREST DR
ST LOUIS, MO 63124

HOBSON, GERALD J OPH
B55 HIGH GREEN CT
MARIETTA, GA 30067

HOEHN, JOHN P GS
12255 DE PAUL DR SUITE
BRIDGETON, MO 63044

HOFFMANN, AUGUSTIN D IM
6222 DELOR
ST LOUIS, MO 63109

HOFFMANN, RONALD E ORS
12255 DE PAUL DR
BRIDGETON, MO 63044

HOFLING, CHAS K P
1221 S GRAND BLVD
ST LOUIS, MO 63104

HOFSTATTER, LEOPOLD N
768 GLEN VISTA DR
ST LOUIS, MO 63122

HOGAN, CORNELIUS E IM
3654 S GRAND BLVD
ST LOUIS, MO 63118

HOGAN, JOHN R IM
67 BERRY PARK RD
ST LOUIS, MO 63122

HOGAN, PATRICK A N
1034 S BRENTWOOD
ST LOUIS, MO 63117

HOGAN, PATRICK C OBG
10004 KENNERLY RD
ST LOUIS, MO 63128

HOLBROOK, CHAS K OM
9901 DIAMOND DR
ST LOUIS, MO 63137

HOLDER, BARRETT K ORS
777 SO NEW BALLAS RD
ST LOUIS, MO 63141

HOLEMON, R E P
2821 N BALLAS RD
ST LOUIS, MO 63131

HOLLIDAY, CRAIG US
406 E LINCOLNWAY
VALPARAISO, IN 46383

HOLLO, VENCEL W GS
911 SOUTH BRENTWOOD
ST LOUIS, MO 63105

HOLLOCHER, RICHARD J ORS
777 S NEW BALLAS RD
CREVE COEUR, MO 63141

HOLSCHER, EDWARD C ORS
234 W JACKSON RD
WEBSTER GROVES, MO 63119

HOLT, EARL P ORS
5505 DELMAR BLVD
ST LOUIS, MO 63112

HOLT, WILLIAM J ORS
7137 CAMBRIDGE
ST LOUIS, MO 63130

HOLT, WM E P
4524 FOREST PARK BLVD
ST LOUIS, MO 63108

HOLTMANN, BARBEL PS
4960 AUDUBON
ST LOUIS, MO 63110

HOLTZ, ALAN S GS
12166 BIG BEND RD
KIRKWOOD, MO 63122

HOLTZ, SUMNER DR
5535 DELMAR
ST LOUIS, MO 63112

HOOKERMAN, BRUCE J D
12255 DE PAUL DR
BRIDGETON, MO 63044

HOOVER, BERNARD L IM
3915 WATSON RD
ST LOUIS, MO 63109

HORENSTEIN, SIMON N
1221 S GRAND BLVD DEPT
ST LOUIS, MO 63104

HORNER, JOHN L IM
615 GARLAND PL
ST LOUIS, MO 63122

HORRILLENO, EMILIO G GP
10418 GREGORY CT
ST LOUIS, MO 63128

HORWITZ, IRWIN B ORS
456 N NEW BALLAS
SUITE 369
ST LOUIS, MO 63141

HOUTTUIN, ERIK U
1325 S GRAND BLVD
DEPT SURG
ST LOUIS, MO 63104

HOWE, ALBERT L IM
300 S GRAND
ST LOUIS, MO 63103

HOWE, LOUIS F GP
1136 RIDGELYNN
ST LOUIS, MO 63124

HSU, CHING F IM
1704 PARIS DR
GODFREY, IL 62035

HUANG, SHI H NS
12 RAMSGATE DR
ST LOUIS, MO 63132

HUCK, FRANK F GP
322 MAIN ST
SAFFORD, AZ 85546

HUCK, RICHARD F IM
2B21 N BALLAS
ST LOUIS, MO 63131

HUDGENS, RICHARD W P
777 S NEW BALLAS RD-STE
ST LOUIS, MO 63141

HUFFAKER, WILLIAM H PS
1035 BELLEVUE
ST LOUIS, MO 63117

HUGGINS, ALBERT M IM
6651 CHIPPEWA ST
ST LOUIS, MO 63109

HUGHES, CHAS P N
WASHINGTON UNIV DEPT-NE
ST LOUIS, MO 63130

HUGHES, ROBT G OM
11745 OLIVE BLVD
ST LOUIS, MO 63141

HULBERT, BERNARD IM
8112 DELMAR BLVD
ST LOUIS, MO 63130

HUMMEL, ANTON J OPH
5203 CHIPPEWA ST
ST LOUIS, MO 63109

HUMMEL, WM C R
1924 MUIR WOODS
ST LOUIS, MO 63131

HUNLETH, FRANK E OBG
6744 CLAYTON RD & BIG B
ST LOUIS, MO 63117

HURLEY, JOSEPH J GS
615 S NEW BALLAS RD
ST LOUIS, MO 63141

HUTCHINSON, JAMES H IM
114 N TAYLOR AVE
ST LOUIS, MO 6310B

HUTCHINSON, WILLIAM DR
2B21 N BALLAS RD
ST LOUIS, MO 63131

HYMAN, ANNA P
40 N KINGSHIGHWAY
APT K-9
ST LOUIS, MO 63108

IKEDA, SHIGEMASA AN
1325 S GRAND
ST LOUIS, MO 63104

INMAN, MAX M IM
3915 WATSON RD
ST LOUIS, MO 63109

IRVIN, WM M P
1035 BELLEVUE STE 202
ST LOUIS, MO 63117

ISHIDA, YASUO OBG
6744 CLAYTON RD
ST LOUIS, MO 63117

ISHIZAWAR, YORCKAY C GS
2601 N WHITTIER
ST LOUIS, MO 63113

ISLAM, MD N OS
10010 KENNERLY RD
ST LOUIS, MO 63128

ISSERMAN, MICHAEL J OPH
456 NORTH NEW BALLAS RD.
ST LOUIS, MO 63141

ITTNER, GEO W IM
5505 DELMAR SUITE 310
ST LOUIS, MO 63112

IWANE, AKIRA AN
4989 BARNES HOSP PL
ST LOUIS, MO 63110

IZMIRLIAN, GRANT GP
1040 N MASON RD
ST LOUIS, MO 63141

JABLONSKI, RAYMOND C R
3RD & 1ST CAPITOL
ST CHARLES, MO 63301

JACOB, KARL A NS
621 S NEW BALLAS RD
ST LOUIS, MO 63141

JACOBS, CHAS C OTO
43 MUIRFIELD LN
ST LOUIS, MO 63141

---

* Doctor of Osteopathy

JACDBS, FREDERICK A PD
10929 ABBOTT AVE
SUN CITY, AZ 85351
JACOBS, JOHN R OTO
980 CHESTNUT RIDGE RD
MANCHESTER, MO 63011
JAFFE, BERNARD M GS
4960 AUDUBDN
ST LDUIS, MD 63110
JAIN, SAVITRI G IM
12166 BIG BEND BLVD
ST LOUIS, MD 63122
JAIN, SUMER C AN
1868 BEAVER RIDGE CT.
CHESTERFIELD, MO 63017
JANNEY, JAMES G IM
950 FRANCIS PL
CLAYTDN, MD 63105
JAROSEWYCZ, DEMETRIUS US
VET AOMIN HOSP
ST LOUIS, MO 63125
JARVIS, CATHY C IM
15951 THROWBRIDGE RD
CHESTERFIELD, MO 63017
JATALA, IJAZ A OM
819 LOCUST
ST LOUIS, MO 63101
JAUDON, JOS C PD
55 S GORE
ST LOUIS, MO 63119
JEAN, J T IM
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
JEDD, JAMES J AN
621 S NEW BALLAS
ST LOUIS, MO 63141
JENKINS, JAMES J AN
216 SO KINGSHIGHWAY
ST LOUIS, MO 63110
JENNY, ARTHUR B US
344 JEFFERSON RD
ST LOUIS, MO 63119
JENSEN, JOSHUA E GS
11155 DUNN RD STE 208
ST LOUIS, MO 63136
JENSEN, JOSHUA E GS
CHRISTIAN HOSPITAL NORT
11155 DUNN RD
ST LOUIS, MO 63136
JICK, SIDNEY CD
10287 CLAYTON RD
ST LOUIS, MO 63124
JOFFE, WM S OPH
211 N MERAMEC AVE
CLAYTON, MO 63105
JOFTUS, MORRIS IM
522 N. NEW BALLAS
SUITE 280
ST LOUIS, MO 63141
JOHNSON, CHAS J PS
1035 BELLEVUE
ST LOUIS, MO 63117
JOHNSON, JOHNNY E JR OBG
7286 #6 NORSTEAD WALK
ST. LOUIS, MO 63121
JOHNSON, MARK F OPH
1101 MEDICAL ARTS AVE NE
SANDIA MED. PARK BLDG 4
ALBUQUERQUE, NM 87102
JOHNSON, MITCHELL D GS
40 N FLORISSANT RD
FERGUSON, MO 63135
JOHNSON, ROY GP
RR #1 BOX 93
FORISTELL, MO 63348
JOHNSON, TOM A GP
615 SO NEW BALLAS RD
ST LOUIS, MO 63141
JOHNSTON, GLEN P OPH
QUEENY TOWER BLDG STE 5
ST LOUIS, MO 63110
JOHNSTONE, JOHN T IM
206 W ARGONNE
KIRKWOOD, MO 63122
JDNES, ANDREW B N
RT 1
SODDY, TN 37379
JONES, ARTHUR C OTO
830 KINGS CLIFF ROAD
ST LOUIS, MO 63122
JONES, DOROTHY J PD
4566 SCOTT AVE
ST LOUIS, MO 63110
JONES, GREY CBG
SAN PEDRO MONTES DE OCA
SAN JOSE
COSTA RICA, 00100
JONES, JAMES D AN
BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
JONES, JAMES H OPH
1035 8ELLEVUE AVE
ST LOUIS, MO 63117
JONES, OTEY S GP
3616 S BROADWAY
ST LOUIS, MO 63118
JONES, RICHARD A IM
777 S NEW BALLAS RD STE
ST LOUIS, MO 63141

JONES, SARA T AN
7347 MARYLAND
ST LDUIS, MO 63130
JDNES, VICTOR T R
950 FRANCIS PL
ST LOUIS, MO 63105
JORDAN, WALTER R GP
112 REANIE DR
CAMERDN, TX 76520
JOSEPH, HARDLD J IM
828 CELLA RD
ST LOUIS, MD 63124
JOSLYN, HARDLD L GE
634 N GRAND BLVD
ST LDUIS, MD 63103
JOST, CHAS A GP
11115 NEW HALLS FERRY R
FLORISSANT, MD 63033
JOTTE, RICHARD F GP
10300 ST CHARLES ROCK R
ST ANN, MO 63074
JUDD, DONALD R TS
950 FRANCIS PL
ST LOUIS, MO 63105
JUDY, JOS D IM
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033
JUERGENS, WM G IM
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
JULIEN, RENE GS
7401 STATE
EAST ST LOUIS, IL 62203
KABIR, MOHAMMED A P
10000 HIGHWAY 366
ST LOUIS, MO 63126
KAHN, LAWRENCE I PD
4566 SCOTT AVE
ST LOUIS, MO 63110
KAIRUZ, BARTOLOME C GP
10004 KENNERLY RD
ST LOUIS, MO 63128
KAISER, GEO C GS
1325 S GRAND BLVD
ST LOUIS, MO 63104
KAMAKAS, NICHOLAS C PD
1245 GRAHAM RD
FLORISSANT, MO 63031
KAMENETZKY, STEPHEN A OPH
10945 PEM RD
ST LOUIS, MO 63141
KAMINSKI, DONALD L GS
1325 S GRAND BLVD
ST LOUIS, MO 63104
KAMINSKY, WATSON W OS
1212 S GRAND BLVD
ST LOUIS, MO 63117
KANE, CLYDE E GP
6046 CLEMENS
ST LOUIS, MO 63112
KANG, JUAN PTH
ALLEN MEDICAL LABORATOR
TOWN & COUNTRY MEDIC
ST LOUIS, MO 63131
KANNEGIESSER, HARTMUT IM
300 S GRAND
ST LOUIS, MO 63103
KANTOR, OWEN IM
1034 SO BRENTWOOD
ST LOUIS, MO 63117
KAO, MING-SHIAN IM
4911 BARNES HOSP PLAZA
ST LOUIS, MO 63110
KAPLAN, ALEX H P
4524 FOREST PARK BLVD
ST LOUIS, MO 63108
KAPPESSER, NETAJEAN G GP
55 FAIR OAKS DR
ST LOUIS, MO 63124
KAPPESSER, ROLAND C AN
55 FAIR OAKS
ST LOUIS, MO 63124
KARANDJEFF, APOSTLE D OTO
1035 BELLEVUE AVE RM 31
ST LOUIS, MO 63117
KARDESCH, MILTON IM
9293 WATSON RD
ST LOUIS, MO 63126
KARL, MICHAEL M IM
4652 MARYLAND AVE
ST LOUIS, MO 63108
KARSH, ROBT S IM
2428 WOODSON RD
ST LOUIS, MO 63114
KASKIE, CLIFFORD R OBG
621 S NEW BALLAS RD
ST LOUIS, MO 63141
KASS, MICHAEL A OPH
660 S EUCLID
ST LOUIS, MO 63110
KATSANTONIS, GEORGE US
1325 S GRAND
ST LOUIS, MO 63104
KAUFMAN, ROBT L OS
456 N NEW BALLAS RD
SUITE 299
ST LOUIS, MO 63141
KAUP, CHANDRA S IM
1125 GRAHAM RD
FLORISSANT, MO 63031

KAYES, JACK OPH
211 N MERAMEC
ST LDUIS, MO 63105
KAZA, RAMARAD U
2601 N WHITTIER ST
ST LOUIS, MO 63113
KEATING, JAMES P GE
ST LOUIS CHILDRENS HDSP
P D BDX 14871
ST LOUIS, MD 63178
KEFFLER, KARL L GP
7306 WISE AVE
ST LOUIS, MO 63117
KELLER, OAVID W OBG
4911 8ARNES HOSP PLAZA
ST LOUIS, MO 63110
KELLER, LOUIS D
950 FRANCIS PL RM 305
CLAYTON, MO 63105
KELLER, MAURICE J PO
9049 CLAYTON RD
ST LOUIS, MO 63117
KELLETT, JOHN G GP
243 KENORA CT
WEBSTER GROVES, MO 63119
KELLY, JOHN J IM
114 N TAYLOR
ST LOUIS, MO 63108
KELLY, R E OM
819 LOCUST ST
ST LOUIS, MO 63101
KELLY, WILLIAM A P
1221 S GRAND
ST LOUIS, MO 63104
KELTNER, RAYMOND M GS
1325 S GRAND
ST LOUIS, MO 63104
KENDIG, JOHN H NS
5505 DELMAR BLVD-RM 509
ST LOUIS, MO 63112
KENDIS, JOS B OS
777 S NEW 8ALLAS RD
ST LOUIS, MO 63141
KENNEY, JOHN D ORS
12615 OLD TESSON ROAD
ST LOUIS, MO 63128
KENNINGTON, L J FP
914 PARKFIELD TERR
BALLWINS, MO 63011
KESSEL, JAMES W OBG
2 JACKLYNN CT
ST LOUIS, MO 63132
KESSLER, SHELDON PD
10910 RONDELAY DR.
ST. LOUIS, MO 63141
KEYES, E L GS
900 S HANLEY RD
ST LOUIS, MO 63105
KHAN, ABDUL G PD
JEFFERSON COUNTY MED AR
ROUTE 1-SUITE 6
ARNOLD, MO 63010
KHAN, ABDUL R P
9730 E WATSON RD
ST LOUIS, MO 63126
KHAN, ALTAF A GE
12166 BIG BEND BLVD
ST LOUIS, MO 63122
KHODADOUST, KAVOUS PTH
1606 GRATTAN
ST LOUIS, MO 63104
KHOLEIF, ALI AN
3624 PASHALL RD.
ST. LOUIS, MO 63135
KIENZLE, EDWARD GP
4075 S GRAND
ST LOUIS, MO 63118
KILKER, CLARENCE H GP
7231 WINCHESTER DR
NORMANDY, MO 63121
KILKER, DONALD E GP
7520 NATURAL BRIDGE RD
NORMANDY, MO 63121
KILLEBREW, DAVID S OTO
BARNES HOSP PLAZA
ST LOUIS, MO 63110
KILO, CHAS IM
777 S NEW BALLAS RD
ST LOUIS, MO 63141
KIM, CHUNG K OBG
451 HAMMERSMITH
ST LOUIS, MO 63141
KIM, STANLEY W R
777 S NEW BALLAS
ST LOUIS, MO 63141
KIM, WON M AN
1325 S GRAND BLVD
ST LOUIS, MO 63104
KIMELMAN, NATHAN IM
6744 CLAYTON RD
ST LOUIS, MO 63117
KING, EUSTACE E GP
111 CHURCH ST
FERGUSON, MO 63135
KING, FRANCIS C GP
11040 MANCHESTER RD
ST LOUIS, MO 63122
KING, JAMES P PD
4211 BAYLESS RD
AFFTON, MO 63123

KING, JOHN V GP
615 S NEW BALLAS RD
ST LOUIS, MO 63131
KING, JOHN V PUD
2995 CLARKSON RD
CHESTERFIELD, MO 63017
KING, MORRIS K IM
660 S EUCLID
ST LOUIS, MO 63110
KINGSLAND, ROBERT C IM
6150 OAKLAND
ST LOUIS, MO 63139
KINSELLA, EDWARD D GE
1035 BELLEVUE
RICHMOND HEIGHT, MO 63117
KINSELLA, PETER W IM
1035 BELLEVUE
ST LOUIS, MO 63117
KINSELLA, RALPH A IM
6305 WESTMINSTER PL
ST LOUIS, MO 63130
KIPNIS, DAVID M IM
660 S EUCLID
ST LOUIS, MO 63110
KISSANE, JOHN M PTH
WASHINGTON U SCH MED
ST LOUIS, MO 63110
KISTLER, WALTER O IM
SUITE 113 MED W BLDG
950 FRANCIS PLACE
CLAYTON, MO 63105
KISTNER, WM F PUD
621 S NEW BALLAS RD
ST LOUIS, MO 63141
KLEIN, ADELBERT H GP
34 N RIDGEWOOD AVE
ARCADIA, MI 49613
KLEIN, ARNOLD G GP
14164 TRAILTOP DR
CHESTERFIELD, MO 63017
KLEIN, SAUL J U
456 N NEW BALLAS RD STE
ST LOUIS, MO 63141
KLENK, CHAS L PTH
5927 SUSON PL
ST LOUIS, MO 63139
KLIPPEL, BERNHARDT W GS
52 FAIR OAKS
ST LOUIS, MO 63124
KLOECKER, RICHARD J GS
12255 DEPAUL SUITE 160
BRIDGETON, MO 63044
KLOECKER, ROBT P OBG
9616 LACKLAND RD
ST LOUIS, MO 63114
KLUZAK, THOMAS R OBG
615 S NEW BALLAS
ST LOUIS, MO 63141
KNEAL, ELLSWORTH PD
725 S SKINKER BLVD
ST LOUIS, MO 63105
KNIGHT, FRANKLIN P GS
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033
KNIGHT, WM A GE
6420 CLAYTON RD
ST LOUIS, MO 63117
KNOCK, HENRY L PD
135 W ADAMS ST
KIRKWOOD, MO 63122
KNOPF, HARRY L OPH
211 N MERAMEC ST
CLAYTON, MO 63105
KNOWLES, ROBT R P
1034 SOUTH BRENTWOOD BL
ST LOUIS, MO 63117
KNOWLTON, NORMAN P IM
14 OAKLEIGH LN
ST LOUIS, MO 63124
KODNER, IRA J CRS
456 N NEW BALLAS RD
ST LOUIS, MO 63141
KOEHLER, GEO A IM
777 S NEW BALLAS RD
ST LOUIS, MO 63141
KOEHLER, ROBERT E DR
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
KOENIG, MARVIN I OPH
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033
KOERNER, KENNETH A PD
2821 N BALLAS RD
ST LOUIS, MO 63131
KOHLER, LOUIS H P
100 N EUCLID AVE
ST LOUIS, MO 63108
KOLKER, ALLAN E OPH
660 S EUCLID AVE
ST LOUIS, MO 63110
KOLODNER, ROBERT P
4940 AUDUBON AVE
ST LOUIS, MO 63110
KOLODNY, ROBT C IM
4910 FOREST PARK BLVD
ST LOUIS, MO 63108
KONZELMAN, JOHN A GP
7401 TEASDALE AVE
UNIVERSITY CITY, MO 63130

KOPMAN, ERCUMENT A AN
BARNES HOSP
ST LOUIS, MO 63110
KOPP, LEONARD J GP
360 LADUEMONT DR
ST LOUIS, MO 63141
KORENBLAT, PHILLIP E A
10287 CLAYTON RD
ST LOUIS, MO 63124
KORN, ROBT L PD
456 N NEW BALLAS
ST LOUIS, MO 63141
KOTNER, LAWRENCE M IM
10358 CHIMNEY ROCK
ST LOUIS, MO 63141
KOVAC, S R OBG
777 S NEW BALLAS RD
ST LOUIS, MO 63141
KOWERT, EDWARD H P
100 N EUCLID ST
ST LOUIS, MO 63108
KRAEGER, RUSSELL R TS
950 FRANCIS PL
ST LOUIS, MO 63105
KRAETSCH, ROBERT E IM
1034 S BRENTWOOD
ST LOUIS, MO 63117
KRAIN, SAMUEL R
141 NORTH MERAMEC
ST LOUIS, MO 63105
KRANER, JUSTIN F OBG
8515 DELMAR
ST LOUIS, MO 63124
KRAUS, FREDERICK T PTH
ST JOHNS MERCY MED CTR-
ST LOUIS, MO 63141
KRAUSE, GEO L GS
9740 LITZSINGER RD
ST LOUIS, MO 63124
KRETCHMAR, ALAN P US
1325 S GRAND BLVD
ST LOUIS, MO 63104
KREWET, FRANK A IM
1700 S SECOND ST
ST LOUIS, MO 63177
KROEGER, GEO B OTO
621 S NEW BALLAS RD
ST LOUIS, MO 63141
KROJANKER, ROLF J P
6651 CHIPPEWA
ST LOUIS, MO 63109
KROMER, CHAS J IM
9101 APPOMATTOX CT
ST LOUIS, MO 63123
KRONEMER, NORTON S PD
12660 LAMPLIGHTER SQUAR
ST LOUIS, MO 63128
KRUPIN, BARBARA A AN
1167 APPLESEED #A
ST LOUIS, MO 63132
KRUPIN, THEODORE OPH
660 S EUCLID
ST LOUIS, MO 63110
KUCZER, ARNOLDO OTO
4511 FOREST PARK
ST LOUIS, MO 63108
KUEBRICH, THOS C GP
111 CHURCH ST
FERGUSON, MO 63135
KUHLMAN, RALPH F IM
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
KUHLMAN, ROBERT E ORS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
KUHN, NOBUKO O IM
6951 DELMAR BLVD
ST LOUIS, MO 63130
KULAK, GARY P
621 S NEW BALLAS
ST LOUIS, MO 63141
KULKAMTHORN, SIRIPORN PM
2464 COUNTRY RUN C
MARYLAND HEIGHT, MO 63043
KULKAMTHORN, SRIPATT GS
10010 KENNERLY RD
ST LOUIS, MO 63128
KUNZ, HAROLD G R
100 N EUCLID
ST LOUIS, MO 63108
KUTRYB, WALTER J IM
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033
KUTTNER, MARIANNE PD
8515 DELMAR BLVD
ST LOUIS, MO 63124
KWAN, VICENTE W IM
4 PARKWAY SHOPPING CENT
POTOSI, MO 63664
KYAW, MYO M R
11155 DUNN RD
ST LOUIS, MO 63136
L'ECUYER, JEROME L PD
9313 MANCHESTER RD
ST LOUIS, MO 63119
LA DRIERE, RAYMOND J PD
450 CHESTERFIELD CENTER
CHESTERFIELD, MO 63017

LA FERRIERE, KEITH OT
517 S EUCLID
ST LOUIS, MO 63110
LABACH, JAMES P PT
3015 N. BALLAS RD
ST. LOUIS, MO 63131
LACY, PAUL E PT
WASHINGTON U SCH MED
ST LOUIS, MO 63110
LADD, CHAS B GP
P.O. BOX 14490
ST LOUIS, MO 63166
LAIRD, JOHN M IM
1125 GRAHAM RD
FLORISSANT, MO 63031
LAM, ERNESTO S GS
142 E LOCKWOOD
ST LOUIS, MO 63119
LAMB, WANDA P
456 N NEW BALLAS RD
SUITE 282
ST LOUIS, MO 63141
LAMPROS, WM P OT
1035 BELLEVUE
ST LOUIS, MO 63117
LANDAU, WM M N
640 S KINGSHIGHWAY
ST LOUIS, MO 63110
LANDER, ROBERT C OR
456 N NEW BALLAS
SUITE 369
ST LOUIS, MO 63141
LANDRY, J H R
2821 N BALLAS RD
ST LOUIS, MO 63131
LANDY, RICHARD PT
6150 OAKLAND
ST LOUIS, MO 63139
LANE, CLINTON W O
950 FRANCIS PL
ST LOUIS, MO 63105
LANE, DANL K D
950 FRANCIS PL
ST LOUIS, MO 63105
LANG, JOHN J R
507 FAIRWAYS CIRCLE
ST LOUIS, MO 63141
LANGAN, JAMES G IM
1231 ORCHARD VILLAGE LN #C
MANCHESTER, MO 63011
LANGE, ADOLPH C OP
6536 DEVONSHIRE
ST LOUIS, MO 63109
LANGENBACH, ALFRED M GP
10012 WOODLAWN
ST LOUIS, MO 63124
LANIER, EARL W GP
2386 NORTH HWY 67
FLORISSANT, MO 63033
LANSANGAN, ISAIAS P IM
BOX 796 E
ARNOLD, MO 63010
LANSCHE, W E ORS
777 S NEW BALLAS RD
ST LOUIS, MO 63141
LAROCCA, FELIX F CH
18 WEST POINT LANE
ST LOUIS, MO 63131
LARSEN, VIRGINIA L PD
5825 SOUTHWEST ST
ST LOUIS, MO 63139
LARSON, PAUL U IM
3654 S GRAND BLVD
ST LOUIS, MO 63118
LATTINVILLE, HENRY E NS
12255 DEL PAUL DR SUITE
BRIDGETON, MO 63044
LAU, LUIS P
1467 REAUVILLE DR-WARSO
ST LOUIS, MO 63122
LAUBER, JOS J US
621 S NEW BALLAS RD
ST LOUIS, MO 63141
LAUER, JOHN O R
555 HIGH MEADOW RD
ST LOUIS, MO 63131
LAUTER, STEVEN IM
777 S NEW BALLAS
ST. LOUIS, MO 63141
LAUX, FRANCE A PTH
2821 NORTH NEW BALLAS
ST LOUIS, MO 63131
LAWRENCE, GEO H N
12303 DE PAUL DR
BRIDGETON, MO 63044
LAWTON, JOHN T IM
522 NORTH NEW BALLAS RD
ST LOUIS, MO 63141
LAYCOB, LELAND M PD
522 N NEW BALLAS
ST. LOUIS, MO 63141
LE BLANC, LEO J CRS
621 S NEW BALLAS RD
ST LOUIS, MO 63141
LEACH, WILFRED OTO
3655 VISTA AVE
ST LOUIS, MO 63110
LEARY, DANL J R
1574 MASON VALLEY RD
ST LOUIS, MO 63131

EE, OUK S 287 GLEN VALLEY OR CHESTERFIELD, MO 63017	AN
EE, DWIGHT A BARNES HOSPITAL DEPT OF E.N.T. ST. LOUIS, MO 63110	OTO
EE, FRANSISKA A 510 S KINGSHIGHWAY ST LOUIS, MO 63110	TR
EE, JOSEPH KING T 510 S KINGSHIGHWAY ST. LOUIS, MO 63110	R
EE, JOSEPH KING TAK 510 S. KINGSHIGHWAY ST. LOUIS, MO 63110	IM
EE, KIL S 11155 DUNN RD ST LOUIS, MO 63136	DR
EE, YEW SOONG 50 ARUNDEL PLACE ST LOUIS, MO 63105	N
EIGHTNER, WM F 550 BEDFORO AVE ST LOUIS, MO 63130	IM
EMING, 8ERT H 11714 CRAIGVIEW DR ST LOUIS, MO 63141	PTH
ENOBEL, MILTON I 10358 CHIMNEY ROCK DR. APT. 24 ST LOUIS, MO 63141	ORS
NOBEL, ROBERT S 140 GAY AVE ST LOUIS, MO 63105	R
ONE, CHERYL 3015 N BALLAS ST LOUIS, MO 63131	PTH
ONE, PHILIP G 1740 MONTCLAIR GASTONIA, NC 28052	PTH
ONHARDT, ERWIN M ST ANTHONYS MED OFFICE SUITE 335 ST LOUIS, MO 63128	IM
PLEY, CHARLES 29 CHAMINDALE ST LOUIS, MO 63141	GP
RWICK, EVERETT R 2821 BALLAS RD N ST LOUIS, MO 63131	GS
SLIE, CHAS H 1065 HAVERSHAM PL DES PERES, MO 63131	GP
VIN, MARVIN E 777 S NEW BALLAS RO ST LOUIS, MO 63141	IM
VINE, LAURENCE A 4949 FOREST PARK ST LOUIS, MO 63108	OTO
VITT, JOS 8515 DELMAR BLVD ST LOUIS, MO 63124	IM
VITT, ROBT G 510 S KINGSHIGHWAY ST LOUIS, MO 63110	OR
VY, IRWIN BARNES HOSP PLAZA STE 5 ST LOUIS, MO 63110	N
VY, JEROME F 4989 BARNES HOSP PLAZA ST LOUIS, MO 63110	GS
VY, MORTON A 522 N NEW BALLAS RD CREVE COEUR, MO 63141	IM
WIN, W H 906 OLIVE ST ST LOUIS, MO 63101	OPH
WIS, CHAS R 7266 CREVELING DR ST LOUIS, MO 63130	A
WIS, JAMES E 1401 S GRAND BLVD GLENN ST LOUIS, MO 63104	GS
WIS, ROBERT D 3660 VISTA ST LOUIS, MO 63104	OPH
ANG, HOWARD S 1429 REAUVILLE DR ST LOUIS, MO 63122	AN
AO, KUN T 11636 ADMINISTRATION DR ST LOUIS, MO 63141	PTH
CHTENSTEIN, JACK R 1402 SOUTH GRANO BLVD ST LOUIS, MO 63104	US
EB, FRANCIS X 621 S NEW BALLAS RD ST LOUIS, MO 63141	PD
EBERMAN, DAVIO M 4989 BARNES HOSP PLAZA ST LOUIS, MO 63110	IM
EBHABER, HARVEY 216 S KINGSHIGHWAY ST LOUIS, MO 63110	OS
LLY, DOUGLAS R 621 S NEW BALLAS RO ST LOUIS, MO 63141	R
LIM, IL T 1325 S GRAND BLVD ST LOUIS, MO 63107	AN
LIMPATARMONKOL, PIEMSAKOI 625 DOUGHTERTY VIEW CT DES PERES, MO 63131	OBG
LINDEMAN, CARL H 7101 WESTMORELAND ST LOUIS, MO 63130	GP
LINDEMAN, JOHN F 15956 KETTINGTON CHESTERFIELD, MO 63017	R
LINDER, HOWARD E 3015 N 8ALLAS RO ST LOUIS, MO 63131	PUD
LINK, ALEXANOER J 2821 N BALLAS ROAD ST LOUIS, MO 63131	DR
LINS, ROBT D 309 MANCHESTER RD MANCHESTER, MO 63011	PD
LIPSCHITZ, ERVIN 777 S NEW BALLAS RD ST LOUIS, MO 63141	P
LIPSITZ, ELLIS S 4511 FOREST PARK ST LOUIS, MO 63108	IM
LISCHER, CARL E 8012 PERSHING AVE ST LOUIS, MO 63105	GS
LISCHWE, DANIEL H 649 S. NEW BALLAS ST. LOUIS, MO 63141	GP
LISS, JAY L 763 SOUTH NEW BALLAS RD ST LOUIS, MO 63141	P
LISSNER, ARTHUR B 1245 GRAHAM RD FLORISSANT, MO 63031	PS
LITTLE, MONROE H 7830 BLACKBERRY AVE ST LOUIS, MO 63130	GP
LITTMANN, LEWIS E 665 S SKINKER BLVD ST LOUIS, MO 63105	IM
LITZOW, LOUIS T 10004 KENNERLY RD RM 22 ST LOUIS, MO 63128	GS
LIVINGSTON, DON G 650 MANCHESTER RD BALLWIN, MO 63011	PD
LOEB, VIRGIL 4989 BARNES HOSP PLAZA ST LOUIS, MO 63110	IM
LOEFFEL, ELLEN S 3654 SO GRAND ST LOUIS, MO 63118	OBG
LOGIE, MAC D 100 N EUCLID AVE ST LOUIS, MO 63108	R
LOHR, ROBT W 236 CONWAY HILL RD ST LOUIS, MO 63141	R
LOITMAN, BERNARD S 10 WASHINGTON TERR ST LOUIS, MO 63112	R
LONDE, ALAN M 456 N NEW BALLAS RD ST LOUIS, MO 63141	GS
LONDE, SOL 4400 LINDELL APT 4B ST LOUIS, MO 63108	PD
LONDON, STANLEY L 456 N NEW BALLAS RD ST LOUIS, MO 63141	GS
LONERGAN, WARREN M 4910 FOREST PARK AVE ST LOUIS, MO 63108	IM
LONG, FRANK B 1034 S 8RENTWOOD BLVD ST LOUIS, MO 63117	OBG
LONSWAY, MAURICE J 8025 DALE AVE ST LOUIS, MO 63117	PD
LOPPICCOLO, VINCENT J 2821 N BALLAS RD ST LOUIS, MO 63131	PD
LOPPICCOLO, VINCENT J 1913 MARCONI AVE ST LOUIS, MO 63110	IM
LORD, RICHARD E 12166 BIG BEND ST LOUIS, MO 63122	ORS
LOTTES, J O 6434 CHIPPEWA ST ST LOUIS, MO 63109	ORS
LOWENSTEIN, PAUL S 18 S KINGSHIGHWAY BLVD ST LOUIS, MO 63108	CD
LOWTHER, GERALD S 901 CLAYTON RD BALLWIN, MO 63011	PD
LOYND, ROBT C 950 FRANCIS PL CLAYTON, MO 63105	US
LU, FANG T 12858 SOMERTON RIDGE DR ST LOUIS, MO 63141	GP
LUCIOO, JOSEPH L 1035 BELLEVUE AVE ST LOUIS, MO 63117	TS
LUECHTEFELD, FRANK 12255 OE PAUL DR BRIDGETON, MO 63044	ORS
LUEDOE, PHILIP S 4424 HAMPTON AVE ST LOUIS, MO 63109	OPH
LUEHRS, ROBT O 14471 BANTRY LA. APT. 2 CHESTERFIELD, MO 63017	CHP
LUGO, SAML 3125 LEMAY FERRY RD ST LOUIS, MO 63125	GS
LUH, ANDREW M 4110 VON TALGE RD ST LOUIS, MO 63128	ORS
LUM, JON T 9378 OLIVE BLVD STE 215 ST LOUIS, MO 63132	P
LUND, HERLUF G 3654 S GRANO AVE ST LOUIS, MO 63118	U
LUND, ROBT H 1034 S BRENTWOOD ST LOUIS, MO 63117	GS
LUTHER, GEORGE A 12166 BIG BEND RD ST LOUIS, MO 63122	ORS
LUTZ, MARTIN H 31 AYLESBURY DR ST LOUIS, MO 63132	IM
LYMAN, EDWARD H 950 FRANCIS PL ST LOUIS, MO 63105	OTO
LYNXWILER, CHESTER P 10005 DODGE DR FENTON, MO 63026	PDC
LYSS, CARL A 456 N NEW BALLAS RD ST LOUIS, MO 63141	IM
LYSS, STANLEY B 456 N NEW BALLAS RD ST LOUIS, MO 63141	PO
LYTTLE, GARNET C 665 S SKINKER BLVD ST LOUIS, MO 63105	OS
MAC CAUGHELTY, THOMAS C 12764 SPRUCE POND ROAD ST LOUIS, MO 63131	AN
MAC DONALD, ROBT R 621 S NEW BALLAS RD ST LOUIS, MO 63141	DR
MACDONALD, KATHRYN P. O. BOX 39B AVALON, CA 90704	OS
MACDONALD, WM C 6744 CLAYTON RD ST LOUIS, MO 63117	GE
MACHEK, OTAKAR 6744 CLAYTON RD ST LOUIS, MO 63117	PM
MACLEOD, ANGUS 3555 SUNSET OFFICE OR ST LOUIS, MO 63127	IM
MACNISH, JAMES M 4919 FOREST PARK ST LOUIS, MO 63108	U
MADDIPATI, SREEDEZI 1325 SOUTH GRAND ST LOUIS, MO 63104	AN
MADOC JONES, HYWEL 4511 FOREST PARK BLVD SUITE 311 ST LOUIS, MO 63108	TR
MADRID, DOMINADOR O 11727 DOVER HILL DR ST LOUIS, MO 63128	GS
MAGEE, WM E 4910 FOREST PARK BLVD ST LOUIS, MO 63108	IM
MAGINN, R R 911 S BRENTWOOD ST LOUIS, MO 63105	GS
MAGNESS, GUY N 608 KINGSLAND AVE UNIVERSITY CITY, MO 63130	GP
MAHE, GEO A 911 S BRENTWOOD BLVD ST LOUIS, MO 63105	IM
MAHER, THOS F 621 S NEW BALLAS RD ST LOUIS, MO 63141	R
MAJORS, PATRICK F 950 FRANCIS ST. LOUIS, MO 63105	IM
MAJORS, PATRICK F 950 FRANCIS PL ST. LOUIS, MO 63105	IM
MALIK, SARFRAZ A DEPT OF INTERNAL MEDICI 601 S BRENTWOOD BLVD ST LOUIS, MO 63105	GE
MALLYA, ASHOK R 5400 ARSENAL ST ST LOUIS, MO 63139	P

MALONEY, ROBT M	16 HAMPTON VILLAGE PLAZ ST LOUIS, MD 63109	U
MALT, SHERWIN H	522 N NEW BALLAS RD ST LOUIS, MO 63141	GS
MAMINTA, NAPOLEON S	2284 WHITBEY RD CHESTERFIELD, MO 63017	PTH
MANANSALA, ANTONIO Q	13335 CDNWAY RD ST LOUIS, MD 63141	GP
MANES-MARTINEZ, JOSE	232 SOUTH WDODS MILL RD. CHESTERFIELD, MO 63017	PTH
MANION, MARIA E	522 N NEW BALLAS RD SUITE 3B2 ST LOUIS, MO 63141	CHP
MANION, PETER J	6405 MURDOCH AVE., ST LOUIS, MD 63109	PD
MANLEY, CHAS B	449 SHERWOOD DR ST LDUIS, MD 63119	U
MANN, ELIZABETH M	7427 TULANE ST LOUIS, MO 63130	P
MANNIS, CHARLES I	522 N NEW BALLAS RD ST LOUIS, MO 63141	ORS
MANSKE, PAUL R	12615 OLD TESSON FERRY RD ST LOUIS, MO 63128	ORS
MANTOVANI, JOHN F	6104 HEEGE RD ST LOUIS, MO 63123	N
MARANAN, DIOSDADO L	4792 VERMILLION DR ST LOUIS, MO 63128	OS
MARAVILLA, LEVY M	4211 BAYLESS AVE ST LOUIS, MO 63123	GP
MARCHOSKY-KOGAN, JOSE A	1507 CERULEAN DR ST LOUIS, MO 63141	NS
MARCUS, MORRIS D	B631 DELMAR BLVD ST LOUIS, MO 63124	D
MARGOLIS, DAVID M	BARNES HOSP ST LOUIS, MO 63110	GE
MARGOLIS, RICHARD M	1125 GRAHAM RD FLORISSANT, MO 63031	PD
MARKS, JAMES	4511 FOREST PARK, RM 311 ST. LOUIS, MO 63108	TR
MARMOR, WM A	1233 GUELBRETH LN ST LOUIS, MO 63141	OTO
MARSH, JEFFREY L	500 S KINGSHIGHWAY ST LOUIS, MO 63110	PS
MARTEL, DOMINIQUE J	7344 PRINCETON AVE ST LOUIS, MO 63130	AN
MARTIN, DANL J	500 NORTHWEST PLAZA ST ANN, MO 63074	OBG
MARTIN, DAVID S	13B3 WHITE ORCHARD ST LOUIS, MO 63141	R
MARTIN, FREDERICK W	325 N KIRKWOOD RD ST LOUIS, MO 63122	OBG
MARTIN, JAMES M	RT #4 COVE LANE LAKE SERENE HATTIESBURG, MS 39401	R
MARTIN, JOHN B	9918 WARSHIRE DR ST LOUIS, MO 63132	OBG
MARTIN, PHILIP L	10000 HIGHWAY 366 ST LOUIS, MO 63126	OTO
MARTINEZ, ARMANDO I	2601 NORTH WHITTIER ST LOUIS, MO 63113	ORS
MARTIREZ, EMMANUEL	224 MERAMEC STA RD VALLEY PARK, MO 630B8	R
MARTZ, JOHN C	325 N KIRKWOOD RD ST LOUIS, MO 63122	PD
MASSIE, EDWARD	9B06 LITZSINGER ROAD ST LOUIS, MO 63124	CD
MASTERS, WM H	4910 FOREST PARK BLDG ST LOUIS, MO 63108	OS
MATHES, STEPHEN J	DEPT OF SURGERY ROOM 593 UNIV. OF CALIF MED. CTR SAN FRANCISCO, CA 94143	PS
MATHEW, MALEAKAL S	10695 BELLEFONTAINE RD ST LOUIS, MO 63137	CHP
MATHEW, RUBY	232 WOODS MILL RD ST LUKES HOSPITAL WE CHESTERFIELD, MO 63017	OBG
MATTHEWS, JDHN G	3707 WATSDN RD ST LOUIS, MO 63109	IM
MAUGHS, SYDNEY B	1034 S BRENTWOOD BLVD S ST LOUIS, MO 63117	P
MAX, PAUL F	950 FRANCIS PL CLAYTDN, MO 63105	OBG
MAXWELL, RICHARD W	4989 BARNES HOSPITAL PL ST LOUIS, MD 63110	IM
MAYER, RDBT A	8631 DELMAR BLVD ST LOUIS, MO 63124	IM
MAYFIELD, WM R	621 S NEW BALLAS RD ST LOUIS, MO 63141	AN
MAYUGA, EDGARDO G	10010 KENNERLY RD ST LOUIS, MO 6312B	AN
MC ADAM, CHAS R	7516 FLORISSANT RD ST LOUIS, MO 63121	GP
MC AFEE, CHESTER A	5505 DELMAR BLVD RM 300 ST LOUIS, MO 63112	GS
MC ALISTER, WM H	510 S KINGSHIGHWAY ST LOUIS, MO 63110	R
MC CALL, EDWIN L	22 HILLTOP DR KIMBERLING CITY, MO 656B6	US
MC CARTHY, JOHN M	1035 BELLEVUE AVE ST LOUIS, MO 631I7	IM
MC CARTY, MICHAEL	216 S KINGSHIGHWAY ST LOUIS, MO 63110	PTH
MC CAUGHAN, JOHN M	4605 LINDELL BLVD ST LOUIS, MO 6310B	GS
MC CLOSKEY, ROBT B	6651 CHIPPEWA ST LOUIS, MO 63109	OTO
MC CLURE, DAVID N	2821 N BALLAS RD ST LOUIS, MO 6313I	PD
MC COOL, JAMES F	3915 WATSON RD ST LOUIS, MO 63109	IM
MC COOL, STANLEY	VETERANS ADMINISTRATION JEFFERSON BARRACKS ST LOUIS, MO 63I25	IM
MC COWN, ALLAN H	9801 LOG CABIN CT ST LOUIS, MO 63124	R
MC GINNIS, WM F	5505 DELMAR SUITE 206 ST LOUIS, MO 63112	OBG
MC KEE, OLIVER A	325 N KIRKWOOD RD KIRKWOOD, MO 63122	D
MC KINNEY, JOE K	777 S NEW BALLAS RD-STE ST LOUIS, MO 63141	P
MC LAUGHLIN, KATHLEEN S	1824 TOPPING RD ST LOUIS, MO 63131	PTH
MC LEAN, ROYAL C	520 W JEWEL AVE KIRKWOOD, MO 63122	GP
MC MULLIN, FORBES A	12615 OLD TESSON ROAD ST LOUIS, MO 6312B	ORS
MC MURRAY, HERBERT C	BOX 7B9 MANCHESTER, MO 63011	GP
MC NALLEY, MICHAEL	135 W ADAMS KIRKWOOD, MO 63122	OBG
MC NAMARA, JOHN J	21 BERKSHIRE RICHMOND HEIGHT, MO 63117	R
MC SWINEY, JOHN G	10 ADAMS ST FERGUSON, MO 63135	GP
MCCLENNAN, BRUCE L	510 SOUTH KINGSHIGHWAY ST. LOUIS, MO 63110	DR
MEADOR, JAMES R	10367 OXFORD HILL DRIVE ST LOUIS, MO 63141	GS
MEADOWS, CHAS D	777 S NEW BALLAS RD ST LOUIS, MO 63141	OM
MEDLER, JOHN F	2B21 N BALLAS RD ST LOUIS, MO 63131	OBG
MEDLER, PAUL L	1034 SOUTH BRENTWOOD ST LOUIS, MO 63117	D
MEDRANO, CRESENCIANO A	P O BOX 364 PERRYVILLE, MO 63775	O
MEDRANO, LINA E	5471 MARTIN LUTHER KING ST LOUIS, MO 63112	I
MEHAN, DONALD J	1035 BELLEVUE ST LOUIS, MO 63117	U
MEHRA, RAVINDER B	10000 WATSDN RD STE P CRESTWOOD, MD 63126	I
MEHRA, S K	6651 CHIPPEWA SUITE 306 ST LOUIS, MO 63109	I
MEHRA, USHA	10000 HIGHWAY 366 CRESTWOOD, MO 63126	U
MEINBERG, WM H	7052 MARYLAND AVE ST LOUIS, MO 63130	O
MEINERS, PAUL N	12255 DE PAUL DR SUITE 240 BRIDGETON, MO 63044	G
MEINERS, THEODORE M	6235 WATERMEN ST LOUIS, MO 63130	O
MELICK, WM F	911 S BRENTWDOD #228 ST LOUIS, MO 63105	U
MELL, ROGER L	1034 S BRENTWDOD BLVD ST LOUIS, MO 63105	O
MELSON, GLENN L	510 S KINGSHIGHWAY ST LOUIS, MO 63110	D
MELTZER, DAVID W	BARNES HOSPITAL PLAZA ST LOUIS, MO 63110	O
MENDELSOHN, GEORGE	5505 DELMAR ST LOUIS, MO 63112	NS
MENDELSOHN, ROBT S	522 NORTH NEW BALLAS ST LOUIS, MO 6314I	I
MENDELSON, DAVID F	141 N MERAMEC AVE ST LOUIS, MO 63105	N
MENDEZ, MANUEL	6424 SOUTHLAND AVE ST LOUIS, MO 63109	P
MENDONSA, LAWRENCE E	9B1I W FLORISSANT BLVD ST LOUIS, MO 63136	OB
MENENDEZ, MANUEL	151B9 ISLEVIEW DR BALLWIN, MO 63011	PT
MENESES, ORLANDO G	11327 GRAVOIS ST LOUIS, MO 63126	GP
MERENDA, SAM J	665I CHIPPEWA ST LOUIS, MO 63109	R
MERRIMS, THEODORE	B63I DELMAR BLVD ST LOUIS, MO 63124	OB
MERRITT, BURCH A	12937 TIMMOR CT ST LOUIS, MO 63131	PD
MESTRES, HUGH M	12660 LAMPLIGHTER SQ ST LOUIS, MO 63I28	PD
METZ, CHAS O	6459 DEVONSHIRE AVE ST LOUIS, MO 63109	GP
MEYER, HARRY E	621 S. NEW BALLAS ST. LOUIS, MO 63141	P
MEYER, HERMAN M	6215 PERSHING AVE ST LOUIS, MO 63130	IM
MEYER, JAMES E	USAF HOSPITAL WHITEMAN WHITEMAN, MO 65305	US
MEYER, JAY L	763 SOUTH NEW BALLAS RD ST LOUIS, MO 63141	P
MEYER, JOHN S	216 S KINGSHIGHWAY ST. LOUIS, MO 63110	CL
MEYER, MELVIN E	4424 HAMPTON ST ST LOUIS, MO 63109	OP
MEYER, WAYNE W	15 BALCON ESTATES DR CREVE COEUR, MO 63141	GS
MEYERS, ELSIE E	6364 ALEXANDER DR CLAYTON, MO 63105	AN
MEYERS, JOHN B	120 NORTH FORSYTH BLVD CLAYTON, MO 63105	IM
MEYERS, ROBT W	4524 FOREST PK BLVD ST LOUIS, MO 63108	P
MEZERA, RAYMOND A	7345 WHITEHAVEN ST LOUIS, MO 63123	CD

ICHAEL, KENNETH D P
777 S NEW BALLAS RD STE
ST LOUIS, MO 63141
ICHAEL, VERNON E GP
812 OLIVE ST
ST LOUIS, MO 63101
ICHAELREE, JOHN F GP
9705 HIGHWAY 66
CRESTWOOD, MO 63126
IDDLETON, JERRY N OBG
777 S NEW BALLAS RD
ST LOUIS, MO 63141
IER, THOS M OBG
1035 BELLEVUE
ST LOUIS, MO 63117
KHAIL, GIRGIS OB
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
KOLAJCZAK, JAMES P
P O BOX 9643
ST LOUIS, MO 63122
LDER, BARRY D OPH
211 N MERAMEC AVE
CLAYTON, MO 63105
ILDER, BENJ OPH
10 TERRYHILL LANE
ST LOUIS, MO 63131
ILES, PAUL W OPH
15 RIDGE CREEK RD
ST LOUIS, MO 63141
ILL, WM B TR
1325 SO. GRAND
DEPT OF RADIATION, ONC.
ST. LOUIS, MO 63104
ILLANGUE, CONSOLACION P IM
8059 WATSON RD
WEBSTER GROVES, MO 63119
LLANGUE, RAFAEL M GS
8059 WATSON RD
WEBSTER GROVES, MO 63119
ILLER, CHARLES W D
C/O ANN ELLIOTT
1324 SYCAMORE ST.
RIVER FALLS, WI 54022
ILLER, CHAS IM
12166 BIG BEND BLVD
KIRKWOOD, MO 63122
ILLER, EDWARD J IM
522 N NEW BALLAS STE 34
ST LOUIS, MO 63141
LLER, GEOFFREY W R
4511 FOREST PARK BLVD
ST LOUIS, MO 63108
LLER, JAMES E OPH
ST LOUIS CHILDRENS HOSP
ST LOUIS, MO 63110
LLER, JAMES R PTH
99 TRENT DR
ST LOUIS, MO 63124
LLER, JULE P P
4524 FOREST PARK BLVD
ST LOUIS, MO 63108
LLER, NORMAN C GP
5006 THOLOZAN
ST LOUIS, MO 63109
LLER, ROBT N AN
ST JOHNS MERCY MED CTR-
ST LOUIS, MO 63141
LLER, WILLIAM R
510 S KINGSHIGHWAY BLVD
ST LOUIS, MO 63109
LLER, WM V PTH
4050 LINDELL BLVD
ST LOUIS, MO 63108
LSTEAD, KENNETH L AN
4817 DORSET AVE
CHEVY CHASE, MD 20015
LSTER, CLYDE R OPH
906 OLIVE ST
ST LOUIS, MO 63101
NNIHAN, ROBT W P
111 S MERAMEC AVE
ST LOUIS, MO 63105
RBAHA, MITCHELL M ORS
4110 VON TALGE RD
ST LOUIS, MO 63128
SHKIN, MARVIN R ORS
522 N NEW BALLAS RD
ST LOUIS, MO 63141
SKOVSKY, EMIL F CD
RUSH HILL FARM
SHEPARD RD
GLENCOE, MO 63038
SSEY, WILBURN C IM
621 S NEW BALLAS RD
ST LOUIS, MO 63141
STRY, TEHMTON S US
35 N CENTRAL
ST LOUIS, MO 63105
TCHELL, EUGENE N GS
3737 NORTH KINGSHIGHWAY
ST LOUIS, MO 63115
TCHELL, KENNETH OPH
660 SOUTH EUCLID
ST LOUIS, MO 63110
THEN, FRANCIS A OS
3877 MARIETTA
ST LOUIS, MO 63121

MODIN, JEFFREY J US
11745 OLIVE ST. RD
ST. LOUIS, MO 63141
MOELLER, FRANK D OBG
777 SO NEW BALLAS RD
ST LOUIS, MO 63141
MOHAPATRA, RAJ N U
12561 AMERSHAM CT
ST LOUIS, MO 63141
MOHINDRA, SUBODH K IM
3015 N BALLAS RD
ST LOUIS, MO 63131
MOLDEN, C S IM
114 NO TAYLOR
ST LOUIS, MO 63108
MOLDEN, CHAS A GP
7520 NATURAL BRIDGE RD
ST LOUIS, MO 63121
MOLITOR, JEROME A R
13427 LAND O WOODS
CREVE COEUR, MO 63141
MONAFO, WM W GS
615 S NEW BALLAS RD
ST LOUIS, MO 63141
MONAT, SEYMOUR M OBG
8631 DELMAR BLVD
ST LOUIS, MO 63124
MONSEES, BARBARA PD
7823 RAVENSRIDGE DR.
SHREWSBURY, MO 63119
MONTANI, CHAS GP
5147 DAGGETT AVE
ST LOUIS, MO 63110
MONTERUBIO, FRED R JR OBG
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
MONTES, ARTURO C GP
4585 WASHINGTON
FLORISSANT, MO 63033
MONTES DE OCA, JULIO IM
950 FRANCIS PL
CLAYTON, MO 63105
MONTGOMERY, AUSTIN F IM
2821 NORTH BALLAS RD
ST LOUIS, MO 63131
MOOLSINTONG, PORNCHAI R
2447 COUNTRY RUN CT
MARYLAND HEIGHT, MO 63043
MOON, THOS R N
12166 BIG BEND BLVD
KIRKWOOD, MO 63122
MOORE, ALVA IM
5142 RAYMOND AVE
ST LOUIS, MO 63113
MOORE, HARRY G CHP
111 S MERAMEC
SUITE 503
ST LOUIS, MO 63105
MOORE, HARRY G OS
625 S SKINKER APT 502
ST LOUIS, MO 63105
MOORE, WALTER L N
35 W BRENTMOOR PARK
CLAYTON, MO 63105
MORALES, JULIO CHP
369 N TAYLOR
ST LOUIS, MO 63108
MORAN, THOS M P
1221 S GRAND BLVD
ST LOUIS, MO 63104
MORGAN, HARRY C ORS
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
MORGAN, STEPHAN S OPH
16 HAMPTON VILLAGE PLAZ
ST LOUIS, MO 63109
MORGAN, WILLY J. C. U
4601 STATE ST.
EAST ST. LOUIS, IL 62205
MORITZ, GERALD OTO
1125 GRAHAM RD
FLORISSANT, MO 63031
MORRIN, KEVIN OBG
5251 WESTMINSTER PL
ST LOUIS, MO 63108
MORRIS, ALAN H ORS
522 N NEW BALLAS RD
ST LOUIS, MO 63141
MORRIS, HARVEY E GP
433 POWELL AVE
ST LOUIS, MO 63135
MORRIS, MARY E PH
2710 S GRAND APT 801
ST LOUIS, MO 63103
MORRISON, ARLEN E IM
2821 N BALLAS RD
ST LOUIS, MO 63131
MORTENSEN, FREDE US
3555 SUNSET OFFICE DR
ST LOUIS, MO 63127
MOSES, ROBT A OPH
660 S EUCLID AVE
ST LOUIS, MO 63110
MOSLEY, JULIAN C GS
3737 N KINGSHIGHWAY
ST LOUIS, MO 63115
MOSQUERA, JAIME J OBG
1245 GRAHAM ST
FLORISSANT, MO 63031

MOTZEL, ALBERT J GP
6238 WASHINGTON BLVD
ST LOUIS, MO 63130
MOWREY, WM O GP
231 NORTHLAND MED BLDG
ST LOUIS, MO 63136
MUCKERMAN, RICHARD I OBG
621 S NEW BALLAS RD
ST LOUIS, MO 63141
MUDD, J F CD
1325 S GRAND BLVD
ST LOUIS, MO 63104
MUELHEIMS, GERHARD H IM
1515 LAFAYETTE AVE
ST LOUIS, MO 63104
MUELLER, CLARENCE E IM
522 N NEW BALLAS RD-STE
ST LOUIS, MO 63141
MUELLER, JOS A GP
3654 S GRAND BLVD
ST LOUIS, MO 63118
MUELLER, MORRIS A GP
4917 RAVENSWOOD APT 111
SAN ANTONIO, TX 78227
MUELLER, ROBT GP
275 UNION BLVD
ST LOUIS, MO 63108
MUELLER, ROBT J P
16 HAMPTON VIL PLAZA
ST LOUIS, MO 63109
MUELLER, WILBUR K R
9645 BIG BEND BLVD
BETHESDA DILWORTH ME
ST LOUIS, MO 63122
MUJUMDAR, SUHAS P U
960 VILLA DR. APT 1
RICHMOND, KY 40475
MULLARKY, WILBUR A IM
10646 ST CHARLES ROCK R
ST ANN, MO 63074
MULLIGAN, LEO V GS
665 S SKINKER RD
ST LOUIS, MO 63105
MULLINS, JOHN E IM
777 S NEW BALLAS RD
ST LOUIS, MO 63141
MUNSCH, ROBERT F OPH
3660 VISTA AVE
ST LOUIS, MO 63110
MURDOCK, NATHANIEL OBG
511 FOREST PARK BLVD.
ST LOUIS, MO 63108
MURPHY, GEO E P
4940 AUDUBON AVE
ST LOUIS, MO 63110
MURPHY, JAMES P CD
911 S BRENTWOOD BLVD
CLAYTON, MO 63105
MURPHY, JOHN C PH
141 N MCRAMEC AVE
CLAYTON, MO 63105
MURPHY, WM A DR
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
MUSCHANY, NORMAN K OBG
522 N NEW BALLAS RD
ST LOUIS, MO 63141
MUSICH, THOMAS F GP
615 S. NEW BALLAS
CREVE COEUR, MO 63141
MYERS, GARY H N
2821 N BALLAS RD
ST LOUIS, MO 63131
MYERS, IVAN T OBG
35 N CENTRAL AVE
ST LOUIS, MO 63105
NAHM, CHUNG C US
3535 SOUTH JEFFERSON AV
ST LOUIS, MO 63118
NAIDU, GONUGUNTLA IM
27 A V A HOSP
J B DIVISION
ST LOUIS, MO 63125
NAIR, K IM
608 HICKORY KNOLL CT
BALLWIN, MO 63011
NAKADA, JAMES R IM
2 HUNTLEIGH DOWNS
ST LOUIS, MO 63131
NALAGAN, MARCOS C IM
9936 HIGHWAY 66
ST LOUIS, MO 63126
NARAYAN, DILIP L GE
5505 DELMAR
SUITE 310
ST LOUIS, MO 63112
NARKIEWICZ, LAWRENCE S IM
12166 BIG BEND
ST LOUIS, MO 63122
NARYKA, JOS J U
911 S BRENTWOOD #228
ST LOUIS, MO 63105
NASEER, RIAZ A N
BARNES HOSPITAL PLAZA
ST LOUIS, MO 63110
NASH, HELEN E PD
1441 N GRAND
ST LOUIS, MO 63106

NASH, HOMER E PO
3737 N KINGSHIGHWAY
SUITE 101
ST LOUIS, MO 63118
NATHAN, LESTER J GS
777 S NEW BALLAS RD
ST LOUIS, MO 63141
NEAR, DAVID M GS
1125 GRAHAM ROAD
FLORISSANT, MO 63031
NELSON, JAMES S PTH
500 SOUTH KINGSHIGHWAY
ST LOUIS, MO 63110
NELSON, JOHN R CD
12166 BIG BEND BLVD
ST LOUIS, MO 63122
NEMEC, STANLEY S R
6500 CHIPPEWA STE 1
ST LOUIS, MO 63109
NESTER, CHARLES A GP
615 S NEW BALLAS
ST LOUIS, MO 63141
NEUMAN, NEAL U
456 N NEW BALLAS RD
ST. LOUIS, MO 63141
NEWMAN, MATTHEW OPH
100 N EUCLID AVE
ST LOUIS, MO 6310B
NEWMAN, PERCY OS
1109 N HANLEY RD
ST LOUIS, MO 63130
NEWMARK, LEONARD N IM
777 S NEW BALLAS RD STE
ST LOUIS, MO 63141
NEWPORT, GERALD OBG
1125 GRAHAM RD
FLORISSANT, MO 63031
NEWTON, GORDON IM
141 N MERAMEC SUITE 202
ST LOUIS, MO 63105
NEWTON, WM T GS
915 N GRAND BLVD
ST LOUIS, MO 63106
NICHOLS, STEVEN H PTH
10010 KENNERLY RD
ST LOUIS, MO 63128
NICKEL, JAMES F IM
621 S NEW BALLAS RD STE
ST LOUIS, MO 63141
NICOLAI, CHAS H U
2821 N BALLAS RD
ST LOUIS, MO 63131
NIEDERMEYER, GEO J OBG
6744 CLAYTON RD
ST LOUIS, MO 63117
NIESEN, FRANK J GS
6500 CHIPPEWA
ST LOUIS, MO 63109
NIEVA, DELFIN T AN
5291 BRASS LANTERN
ST LOUIS, MO 6312B
NIGH, CHAS A GS
3915 WATSON RD
ST LOUIS, MO 63109
NISHI, TOSHIO PTH
3071 ANDOVER DR
ST LOUIS, MO 63121
NOLAN, CHAS J R
MAC 4TH & WASHINGTON RD
ST LOUIS, MO 63102
NOLLER, HENRY W IM
9440 MIDLAND AVE
ST LOUIS, MO 63114
NOMURA, ROY M PTH
777 S NEW BALLAS
ST LOUIS, MO 63141
NORLAND, CHAS C IM
114 N TAYLOR
ST LOUIS, MO 63108
NORONHA, REYNOLD F U
1325 S GRAND
ST LOUIS, MO 63104
NOUHAN, JOS G OBG
621 S NEW BALLAS STE 56
CREVE COEUR, MO 63141
NOURI, HASSAN OBG
12622 ALSWELL LANE
ST LOUIS, MO 6312B
NOVACK, MARK A IM
141 N MERAMEC
CLAYTON, MO 63105
NUETZEL, JOHN A IM
911 S BRENTWOOD BLVD
CLAYTON, MO 63105
NUÑEZ, MARIA A PO
2821 BALLAS RD STE 135
ST LOUIS, MO 63131
NYE, ROBT S GP
8701 GRAVOIS AVE
ST LOUIS, MO 63123
O'BANNON, LON W IM
1125 GRAHAM RD
FLORISSANT, MO 63031
O'BRIEN, EDWARD C GP
605 CANDLEBURY CT-APT B
ST LOUIS, MO 63122
O'BRIEN, EDWARD J R
6150 OAKLAND AVE
ST LOUIS, MO 63139
O'BRIEN, ROBERT M ORS
777 S NEW BALLAS RD
ST LOUIS, MO 63141
O'CONNELL, TIMOTHY GS
4453 ASHFORD CT
ST LOUIS, MO 63129
O'CONNOR, ROBT J GP
751 ST FRANCOIS ST
FLORISSANT, MO 63031
O'DONNELL, JOS V IM
1661 DUNMORR
ST LOUIS, MO 63131
O'DOWD, JAMES A GP
9405 MACKENZIE RD
ST LOUIS, MO 63123
O'KEEFE, JOS O OBG
135 W ADAMS ST
KIRKWOOD, MO 63122
O'NEAL, LAWRENCE W GS
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
O'NEAL, PATRICIA L P
4989 BARNES HOSP PLAZA-
ST LOUIS, MO 63110
O'REILLY, O E ORS
1325 S GRAND BLVD
ST LOUIS, MO 63104
O'SULLIVAN, DANL F GS
10007 KENNERLY RD
SUITE A
ST LOUIS, MO 63128
OAKLEY, MARGARET M AN
407 STEEPLE CHASE
ST LOUIS, MO 63131
OBADINA, OLUKUNLE O GS
2601 N WHITTIER
ST LOUIS, MO 63113
OBERMEYER, CHAS G AN
3957 HOLLY HILLS BLVD
ST LOUIS, MO 63116
OETTER, DONALD L A
1040 MASON RD N
ST LOUIS, MO 63141
OGLESBY, RICHARD B OPH
621 S NEW BALLAS RD
ST LOUIS, MO 63141
OGNYANOV, VOISLAV F P
551 WHITE ROSE LANE
ST LOUIS, MO 63132
OGURA, JOS H OTO
1038 WINWOOD DRIVE
ST LOUIS, MO 63124
OHLMS, DAVID L P
777 S NEW BALLAS RD
ST LOUIS, MO 63141
OHMOTO, MASAO IM
141 M MERAMEC ST STE 11
CLAYTON, MO 63105
OJASCASTRO, ALEJANDRO C GP
9465 CROOKED CREEK TRAI
ST LOUIS, MO 63127
OKUN, EDWARD OPH
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
OLANDER, DAVID S PDC
456 N NEW BALLAS RD
ST LOUIS, MO 63141
OLLINGER, HENRY G PS
4910 FOREST PARK
ST LOUIS, MO 63110
OLNEY, JOHN W P
BARNES HOSP
ST LOUIS, MO 63110
OLSON, ROBT E IM
1402 S GRAND BLVD
ST LOUIS, MO 63104
OMELL, GARY H OR
467 KILLEARN
ST LOUIS, MO 63141
ONG, ENG L OS
1276 WHITE RD
CHESTERFIELD, MO 63017
ONG, OFELIA S OBG
1276 WHITE RD
CHESTERFIELD, MO 63017
ONKEN, HENRY O PS
106 ABERDEEN
ST LOUIS, MO 63105
OPPENHEIMER, HENRY E IM
141 N MERAMEC AVE
CLAYTON, MO 63105
ORENSTEIN, JOSEPH M PUD
417 JACKSON AVE
ST LOUIS, MO 63130
ORGEL, MAURICE N IM
1 HARCOURT DR
ST LOUIS, MO 63105
ORGEL, STUART M IM
9B33 COPPER HILL RD
ST LOUIS, MO 63124
ORILLE, OSCAR P R
WESTGATE DR.
APT. 204 B
WHEELING, WV 26003
ORSAY, PAUL K OR
11155 DUNN RD RM 201
ST LOUIS, MO 63136
ORTBALS, DAVID W IM
8631 DELMAR BLVD SUITE
ST LOUIS, MO 63124
ORTIGUERO, LEOPOLDO M GP
10577 WINDSWEPT DR
ST LOUIS, MO 6312B
ORTILLO, AMADO P GP
103 N TAYLOR
ST LOUIS, MO 63122
ORTMEYER, LEROY F IM
11372 FIVE OAKS PARKWAY
ST LOUIS, MO 63128
OSTAPOWICZ, FRANK OB
3660 VISTA AVE
ST LOUIS, MO 63110
OTT, FLETCHER T OP
3 HILL DRIVE
GLENDALE, MO 63122
OTT, HAROLD J OB
1695 S BRENTWOOD BLVD
ST LOUIS, MO 63144
OTT, HAROLD J GP
2816 SUTTON AVE
ST LOUIS, MO 63143
OTT, WM J OB
365 WEST POINT CT
ST LOUIS, MO 63130
OTTENSMEYER, CHAS O P
BOX 177
WYOMING STATE HOSPITAL
EVANSTON, WY 82930
OTTOLINI, JAMES L OB
621 S NEW BALLAS RD
ST LOUIS, MO 63141
OWEN, ROBT F IM
12 HACIENDA DR
ST LOUIS, MO 63124
OWENS, WM O OS
BARNES HOSP P DPT ANES
ST LOUIS, MO 63110
OZMAT, ORHAN M R
4 LADUE CREST LANE
ST LOUIS, MO 63124
PACKMAN, PAUL P
4940 AUDUBON AVE
ST LOUIS, MO 63110
PACKMAN, ROBT C IM
4652 MARYLAND AVE.
ST. LOUIS, MO 63108
PADILLA, DOMINGO JR OB
1325 SOUTH GRAND BLVD.
ST. LOUIS, MO 63104
PADILLA, TERESITA C OB
5505 DELMAR BLVD
ST LOUIS, MO 63112
PAEZ, MAURO A PT
11636 ADMINISTRATION DR
ST LOUIS, MO 63141
PAINE, ROBT CD
5535 DELMAR BLVD
ST LOUIS, MO 63112
PALAZZO, FRANK A NS
6744 CLAYTON RD
ST LOUIS, MO 63117
PALETTA, FRANCIS X PS
1035 BELLEVUE
ST LOUIS, MO 63117
PALETTA, FRANK CD
1040 NORTH MASON RD
ST LOUIS, MO 63141
PALETTA, THEODORE L CD
1040 MASON RD N
ST LOUIS, MO 63141
PALETTA, VICTOR L CD
-585 COEUR DE ROYALE AP
ST LOUIS, MO 63141
PALMBERG, PAUL F OPH
660 S. EUCLID
ST. LOUIS, MO 63110
PAPPALARDO, CARLOS PS
621 S NEW BALLAS RD
ST LOUIS, MO 63141
PARDO, LEOPOLDO P NS
9936 HIGHWAY 66
ST LOUIS, MO 63126
PARIKH, SHARAD P OS
7521 W. FLORRISANT
ST LOUIS, MO 63136
PARIS, WM H US
7520 NATURAL BRIDGE RD
NORMANDY, MO 63121
PARK, AGATHA L D
11155 DUNN RD
ST LOUIS, MO 63136
PARKER, THOS W IM
7298 GREENWAY DR
ST LOUIS, MO 63130
PARKS, CHARLES GS
SUITE 129
456 N NEW BALLAS RD
CREVE COEUR, MO 63141
PARSONS, RICHARD P U
777 S NEW BALLAS RD
ST LOUIS, MO 63141
PARTAP, PRABHA PTH
9620 HARTSDALE DR
ST LOUIS, MO 63126
PARWATIKAR, SADASHIY D P
5400 ARSENAL ST
ST LOUIS, MO 63139
PASIA, EBELLO T GS
12127 BELLEFONTAINE RD
ST LOUIS, MO 63138

ASKAR, LARRY D R
1246 MONCOEUR
ST LOUIS, MO 63141
ASSANANTE, BARTHOLOMEW M GS
15 KING LYNN
ST LOUIS, MO 63132
ATEL, B K R
1711 PRENDERGAST LANE
ST LOUIS, MO 63138
ATEL, SHARAD B AN
1446 CHANDELLAY ORIVE
ST LOUIS, MO 63141
ATRICK, ROMAN L PTH
11636 ADMINISTRATION DR
CREVE COEUR, MO 63141
AUL, PAUL V GS
321 BARRINGTON SQ
ST LOUIS, MO 63122
AULL, BARRY R R
550 S. KINGSHIGHWAY
ST. LOUIS, MO 63110
AYNE, MEREDITH C PS
7314 WESTMORELAND PLACE
ST LOUIS, MO 63130
AYNE, RICHARD L PTH
2639 MIAMI ST
ST LOUIS, MO 63118
AYNE, VAUGHN C GP
1423 N GRAND BLVD
ST LOUIS, MO 63106
EARLMAN, ALAN L N
660 S EUCLID AVE
ST LOUIS, MO 63110
EOEN, BURNET W IM
35 N CENTRAL AVE
CLAYTON, MO 63105
EDEN, JAMES C IM
621 S NEW BALLAS RD
ST LOUIS, MO 63141
EDEN, JOS C R
665 S SKINKER BLVD APT
ST LOUIS, MO 63105
EDEN, JOS C GS
5505 DELMAR STE 300
ST LDUIS, MO 63112
EE8LES, JONATHAN B US
RR #1
BUCHANAN, TN 38222
ELICAN, GEORGE GE
621 S NEW BALLAS RD
ST LOUIS, MO 63141
ELZ, MORT D OTO
1116 CHANTAL LANE
ST LOUIS, MO 63132
ENILLA, ANTONIO R IM
3159 FEE FEE RD
BRIDGETON, MO 63044
ENNINGTON, D G GS
1325 S. GRAND AVE.
ST. LOUIS, MO 63104
ENNINGTON, FRANCIS E GS
4160 GLIDDEN DR
STURGEON BAY, WI 54235
ENNOYER, JAMES OBG
4910 FOREST PARK BLVD
ST LOUIS, MO 63108
EPPER, EDWARD G R
6150 OAKLAND AVE
ST LOUIS, MO 63139
EPPER, MAX P PH
DEPT OF COMMUNITY MEDIC
ST LOUIS UNIV SCHOOL
ST LOUIS, MO 63104
EREZ, AOAMOR R GS
4415 VERMILLON DR
ST LOUIS, MO 63128
EREZ, BLANCA M PTH
216 SOUTH KINGSHIGHWAY
ST LOUIS, MO 63110
EREZ, CARLOS A TR
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
ERKINS, DAVID E DR
1034 S BRENTWOOD
ST LOUIS, MO 63117
ERKOFF, GERALD T IM
DIVISION OF HEALTH CARE
WASHINGTON U SCHOOL
ST LOUIS, MO 63110
ERNOUD, FLAVIUS G OPH
1035 BELLEVUE
ST LOUIS, MO 63117
RNOUD, FLAVIUS G OPH
6735 WESTWAY ROAD
ST LOUIS, MO 63109
RNOUD, JOAN M OPH
6735 WESTWAY ROAD
ST LOUIS, MO 63109
RNOUD, MICHAEL F OPH
1035 BELLEVUE
SUITE 501
ST LOUIS, MO 63117
RRY, HORACE M CD
915 N GRAND
ST LOUIS, MO 631D6
RRY, WM D IM
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117

PESKIN, EOWARD G O8G
4911 BARNES HOSPITAL PL
ST LOUIS, MO 63110
PETERSON, FREOERICK D PD
8025 DALE AVE
ST LOUIS, MO 63117
PETERSON, GARY J GS
6736 EL PROGRESSO ST
LONG BEACH, CA 90815
PETRUSKA, PAUL J IM
1325 S GRAND
ST LOUIS, MO 63104
PFEIFER, OLIVER C GP
6567 MURDOCK
ST LOUIS, MO 63109
PHILIP, VARKEY OS
525 COUCH AVE
KIRKWOOD, MO 63122
PHILLIPS, ABRAHAM M PD
777 S NEW BALLAS RD
ST LOUIS, MO 63141
PHILLIPS, HANFORD P
6825 CLAYTON AVE
ST LOUIS, MO 63139
PHILLIPS, JOHN J ORS
12255 DE PAUL DR
BRIOGETON, MO 63044
PHILLIPS, WM J CD
5505 OELMAR
ST LOUIS, MO 63112
PHILPOTT, GORDON W GS
216 SOUTH KINGSHIGHWAY
ST LOUIS, MO 63110
PHIPATANAKUL, C S US
1125 GRAHAM RD
FLORISSANT, MO 63031
PHIPATANAKUL, SUPOTE OTO
135 W ADAMS
ST LOUIS, MO 63122
PICCIONE, LEONARD N GP
2377 BROADMONT CT
CHESTERFIELD, MO 63017
PILEPICH, MILIENKO V R
4511 FOREST PARK
ST. LOUIS, MO 63108
PILLA, LAWRENCE A R
#7 HOMELAND PL
ST LOUIS, MO 63109
PIMENTEL, ESPERANZA M GP
2323 CHAMBERS
ST LOUIS, MO 63136
PIMENTEL, MAURICIO F GP
VA HOSPITAL
915 NO GRAND
ST LOUIS, MO 63125
PINEDA, HECTOR O IM
5203 CHIPPEWA
ST LOUIS, MO 63109
PIPER, AUGUST T IM
4903 MARTIN LUTHER KING
ST LOUIS, MO 63113
PITSINGER, NOLAN B GS
5505 DELMAR ST STE 511
ST LOUIS, MO 63112
PITTMAN, GERALD R PTH
5 HIGH ACRES DR
ST LOUIS, MO 63132
PITTMAN, SUSAN PD
522 N NEW BALLAS RD
ST LOUIS, MO 63141
PIZZIMBONO, CARLOS A GS
1212 BROADWAY
HIGHLAND, IL 62249
PLAX, STEVEN I PD
8025 DALE
ST LOUIS, MO 63117
PLUMPE, WM T IM
4415 MINNOSOTA
ST LOUIS, MO 63111
PDRPORIS, ARTHUR A R
824 RENDERER DR
ST LOUIS, MO 63122
PORTUGAL, ANTONIO Q GS
6500 CHIPPEWA STE 116
ST LOUIS, MO 63109
PORTUONDO, BONAVENTURE C PTH
3532 FLORA COURT
ST LOUIS, MO 63104
POST, LAWRENCE T OPH
211 N MERAMEC
CLAYTON, MO 63105
POST, STEPHEN L P
4524 FOREST PARK APT 20
ST LDUIS, MD 63108
POTASHNICK, ROBT IM
12255 DE PAUL DR
SUITE 865
BRIDGETON, MO 63044
POTTER, REESE H P
100 N EUCLID AVE
ST LOUIS, MO 63108
POTTS, DAN E US
114 NORTH TAYLOR AVE
ST LOUIS, MO 63108
PDWELL, CHARLES B ORS
1125 GRAHAM RD
FLDRISSANT, MO 63031
POWELL, EARL A U
11114 PALMERAS DR
SUN CITY, AZ 85351

POWELL, JOHN A O
911 SO BRENTWOOD
ST LOUIS, MO 63105
POWERS, PIERCE W GS
5203 CHIPPEWA ST
ST LOUIS, MO 63109
PRENSKY, ARTHUR L N
DEPT OF PEDIATRICS WASH
500 S KINGSHIGHWAY
ST LOUIS, MO 63178
PRESANT, CARY A IM
216 S KINGSHIGHWAY 8LVO
ST LOUIS, MO 63110
PRESNELL, CLEITUS A OTO
6744 CLAYTON RD
ST LOUIS, MO 63117
PRICE, KENNETH C CD
5505 DELMAR- ROOM 201
ST LOUIS, MO 63112
PROBST, RAYMOND E OBG
10345 WATSON RO
ST LOUIS, MO 63127
PROBSTEIN, JACOB G GS
4943 LINDELL BLVD
ST LOUIS, MO 63108
PROPHETE, BEAUMANOIR U
3737 N KINGSHIGHWAY 8LV
ST LOUIS, MO 63115
PROSKEY, VINCENT J IM
522 N NEW BALLAS RD
ST LOUIS, MO 63141
PRUETT, BURCHARD S OS
10321 RICHVIEW DR
ST LOUIS, MO 63127
PRUETT, DON S GS
10 LOG CABIN DR
ST LOUIS, MO 63124
PRUETT, HUBERT S GP
9 MC KNIGHT LANE
ST LOUIS, MO 63124
PRUSACZYK, JOS V PD
34 AUBURNDALE DR
ST LOUIS, MO 63141
PURCELL, HARRY K GS
911 S BRENTWOOD BLVD
ST LOUIS, MO 63105
PURCELL, JOHN OPH
6744 CLAYTON RD
ST LOUIS, MO 63117
PYNE, HERBERT S GP
6651 CHIPPEWA
ST LOUIS, MO 63109
QUADIR, HUMAYUM IM
10004 KENNERLY RD
ST LOUIS, MO 63128
QUICK, RICHARD T P
9821 COPPER HILL ROAD
ST LOUIS, MO 63124
QURESHI, ABDUL R IM
10004 KENNERLY ROAD
ST LOUIS, MO 63128
RACADIO, SEVERO M GP
1241 JEFFCO BLVD
ARNOLD, MO 63010
RACHLIN, MAXWELL OPH
211 N MERAMEC
ST LOUIS, MO 63105
RADER, EDWARD S U
7744 DAVIS DR.
CLAYTON, MD 63105
RADER, GEO B GS
5505 DELMAR
ST LOUIS, MO 63112
RADKE, JOHN D CD
6150 OAKLAND AVE
ST LDUIS, MO 63139
RAHMAN, MOUDUDUR OPH
911 S BRENTWODD
ST LOUIS, MO 63105
RAICHLE, MARCUS E N
710 JAMAICA CT
ST LOUIS, MO 63122
RAINEY, ROBT OM
5165 LINDELL BLVD
ST LOUIS, MD 63108
RAJA-SEKHAR, RUDRAIAH AN
1325 S. GRAND BLVO.
ST. LOUIS, MO 631D4
RAMIREZ, SAML G IM
7449 W FLORISSANT
ST LOUIS, MO 63136
RAMSEY, ROBT H IM
11115 NEW HALLS FERRY R
FLORISSANT, MO 63033
RANDOLPH, BERNARD C GP
3737 N KINGSHIGHWAY
ST LOUIS, MO 63115
RANKIN, DIANE CHP
4521 PERSHING ST
ST LOUIS, MO 63108
RAO, ASWATH N ORS
65D0 CHIPPEWA ST
ST LDUIS, MO 63109
RAO, CARLO GS
7521 W FLORISSANT
ST LDUIS, MO 63136
RAO, S N GP
10822 ST CHARLES ROCK R
ST ANN, MO 63074

RAPPOLD, OTTO H	500 NORTHWEST PLAZA-APT ST ANN, MO 63074	OBG
RATCHESON, ROBT A	8ARNES HOSP-DEPT NEUR-S ST LOUIS, MO 63110	NS
RATKIN, GARY A	100 N EUCLID ST LOUIS, MO 63108	IM
RAY, JEAN L	P. O. BOX 2114 DAMMAM SAUDI ARABIA, 00000	GP
RAYBUCK, HARRY E	3533 RITZ CENTER ST LOUIS, MO 63125	OBG
REARDON, THOS F	771 GABRIEL CT ST LOUIS, MO 63122	IM
RECANO, RICARDO Q	4440 WAZARETH HILLS DR ST LOUIS, MO 63129	GP
REDDI, RAGHUNATH	1325 S GRAND ST LOUIS, MO 63104	TR
REDDY, M V	5400 ARSENAL ST ST LOUIS, MO 63139	N
REDINGTON, JAMES C	911 S BRENTWOOD ST LOUIS, MO 63105	IM
REED, JOHNATHAN R	100 NORTH EUCLID AVE ST LOUIS, MO 63108	OBG
REED, LESLIE G	VA HOSPITAL 170 - J C ST LOUIS, MO 63125	GP
REESE, ALMA V	120 E LOCKWOOD AVE WEBSTER GROVES, MO 63119	GP
REESE, LESTER T	522 N NEW BALLAS RD-STE ST LOUIS, MO 63141	D
REEVES, GLEN I	1400 SUSSEX DR. OCEAN SPRINGS, MS 39564	TR
REH, THOS E	6420 CLAYTON RD ST LOUIS, MO 63117	R
REICH, HARRY A	5100 TAMM AVE ST LOUIS, MO 63109	GP
REICHERT, TIMOTHY J	500 S. KINGSHIGHWAY ST. LOUIS, MO 63110	OTO
REICHERT-PASZKIEWICZ, M	10063 ELISE DR ST LOUIS, MO 63123	IM
REIDER, RICHARD A	353 RUE RENER ST LOUIS, MO 63122	IM
REINECK, JOHN A	5410 RHODES ST LOUIS, MO 63109	OM
REINHARD, EDWARD H	4989 8ARNES HOSPITAL PL ST LOUIS, MO 63110	IM
REISLER, DAVID M	522 N NEW BALLAS RD ST LOUIS, MO 63141	N
REITER, FEDERICO B	11155 DUNN RD ST LOUIS, MO 63136	DR
REITMAN, STANLEY	158 MAYFAIR PLAZA FLORISSANT, MO 63033	IM
REJENT, ANTHONY J	4211 BAYLESS RD ST LOUIS, MO 63123	PD
RENDLEMAN, DAVID D	35 N CENTRAL CLAYTON, MO 63105	IM
RENDLEMAN, GEO F	812 OLIVE ST ST LOUIS, MO 63101	GS
RENDLEMAN, GEO F	812 OLIVE ST ST LOUIS, MO 63111	GS
RENNARD, MARVIN	2821 N BALLAS RD STE 25 ST LOUIS, MO 63131	OBG
REPP, THEODORE J	158 MAYFAIR PLAZA FLORISSANT, MO 63033	IM
REUTER, LOUIS A	911 S BRENTWOOD 8LVD SUITE 100 ST LOUIS, MO 63105	OM
REVELEY, MICHAEL A	3810 DEER TRAIL TEMPLE, TX 76501	P
REYES, JOSE T	455 STEEPLE CHASE LANE ST LOUIS, MO 63131	AN
REYES, LUIS A	9814 MAR-ANN CT ST LOUIS, MO 63128	GS
REYES, ROSENDO A	10157 HAUSFEL CT ST LOUIS, MO 63128	GP
REYNOLDS, FREDERICK C	4960 AUDUBON AVE ST LOUIS, MO 63110	ORS
REYNOLDS, JAMES A	141 N MERAMEC ST LOUIS, MO 63105	IM
RHEE, DONG S	P. O. BOX 24507 ST LOUIS, MO 63141	AN
RHEE, SEOUNG E	3555 RITZ CENTER ST LOUIS, MO 63125	GP
RIBAUDO, J M	456 N NEW BALLAS RD SUITE 266 ST LOUIS, MO 63141	PS
RICHARDS, FRANK O	3737 N KINGSHIGHWAY ST LOUIS, MO 63115	GS
RICHARDSON, THOS F	4989 BARNES HOSPITAL PL ST LOUIS, MO 63110	P
RICHMAN, ELMER	P O 8OX 105 CHESTERFIELD, MO 63017	A
RICHMOND, MICHAEL R	1125 GRAHAM RD FLORISSANT, MO 63031	IM
RIDGEWAY, WM G	6651 CHIPPEWA ST LOUIS, MO 63109	OPH
RIES, DOUGLAS A	8 PORTLAND DR ST LOUIS, MO 63131	GS
RIGGIO, SALVATORE N	10349 WATSON RD ST LOUIS, MO 63127	PD
RILEY, JOHN J	12255 DEPAUL DR SUITE 345 8RIDGETON, MO 63044	IM
RING, EDWARD M	522 N 8ALLAS RD ST LOUIS, MO 63141	TS
RITCHIE, FRANCES R	720 OLIVE ST 24TH FLOOR ST LOUIS, MO 63101	GP
RITTER, HUBERT A	1035 BELLEVUE RICHMOND HEIGHT, MO 63117	OBG
RITTER, PAUL J	1035 BELLEVUE RICHMOND HEIGHT, MO 63117	OBG
RIZZO, ADOLFO E	9216 CLAYTON RD STE 105 ST LOUIS, MO 63124	CHP
ROARK, PAUL M	187 CONCORD PLAZA ST LOUIS, MO 63128	OPH
ROBBEN, GEORGE G	2821 NO BALLAS RD ST LOUIS, MO 63131	IM
RO8BINS, PHILIP	621 S NEW BALLAS RD ST LOUIS, MO 63141	CRS
ROBERTS, HAROLD K	434 S HANLEY RD CLAYTON, MO 63105	IM
ROBERTS, JOHN P	3015 BARRETTS STATION R KIRKWOOD, MO 63122	IM
ROBERTSON, FRANK G	456 NO NEW BALLAS RD ST LOUIS, MO 63141	OBG
ROBINSON, EDITH C	BRIAR OAK ST LOUIS, MO 63132	CHP
ROBLEE, MELVIN A	WESTMINSTER-CANTERBURY HS 1600 WEST8ROOK APT 228 RICHMOND, VA 23227	OBG
ROCHE, MAURICE 8	4400 LINDELL BLVD APT. 14-M ST LOUIS, MO 63108	ORS
RODEN, VERNON J	456 N NEW BALLAS RD ST LOUIS, MO 63141	PD
RODRIGO, BERNARDO R	12537 ROYAL MANOR ST LOUIS, MO 63141	AN
RODRIGUEZ, FA8IO	MALLINCKRODT INST OF RAD. ST. LOUIS, MO 63110	DR
RODRIGUEZ, UBALDO R	2650 TELEGRAPH RD ST LOUIS, MO 63125	GS
ROGERS, HUNTER B	819 LOCUST ST ST LOUIS, MO 63101	GS
RONGEY, KENNETH A	1325 S GRAND BLVD ST LOUIS, MO 63104	AN
ROOS, ALBERT	660 S EUCLID ST LOUIS, MO 63110	AN
ROPER, CHAS L	BARNES HOSP PLAZA ST LOUIS, MO 63110	TS
ROSECAN, MARVIN	4910 FOREST PARK BLVD ST LOUIS, MO 63108	IM
*ROSELL, LOUIS V	950 FRANCIS PL ST LOUIS, MO 63105	GP
ROSENBAUM, HARRY D	522 N NEW 8ALLAS RD-APT ST LOUIS, MO 63141	OPH
ROSENBAUM, HERBERT E	456 N NEW BALLAS #290 ST LOUIS, MO 63141	N
ROSENBERG, DAVID S	1040 N MASON RD ST LOUIS, MO 63141	OS
ROSENFELD, HENRY	1209 BETHESDA ST LOUIS, MO 63117	IM
ROSENTHAL, RANDALL	522 N NEW BALLAS RD ST LOUIS, MO 63141	P
ROSKIND, JOEL	9965 AVIARY DR SAN DIEGO, CA 92131	HS
ROSS, DENNIS L	2309 FLYNN WICHITA, KS 67208	IM
ROSS, WM J	119 CHURCH ST ST LOUIS, MO 63135	PD
ROTH, JOHN J	522 N NEW BALLAS-STE 24 ST LOUIS, MO 63141	IM
ROTHMAN, DAVID	2821 8ALLAS RD STE 255 ST LOUIS, MO 63131	OBG
ROTHWEILER, ROBT J	11745 OLIVE ST RD ST LOUIS, MO 63141	OTO
ROTSKOFF, KENNETH S	911 S 8RENTWOOD ST LOUIS, MO 63105	OS
ROULHAC, GEO E	5505 DELMAR BLVD ST LOUIS, MO 63112	NS
ROUSE, ERNEST T	1034 S 8RENTWOOD BLVD ST LOUIS, MO 63117	IM
ROUSE, ERNEST T	1034 S BRENTWOOD ST LOUIS, MO 63117	PUD
ROUSH, GEO	800 N LINDBERGH ST LOUIS, MO 63166	OM
ROY, JOS A	12255 DE PAUL DR SUITE BRIDGETON, MO 63044	GS
ROYCE, ROBT K	766 HIGH HAMPTON RD ST LOUIS, MO 63124	U
ROYSTON, GRANDISON D	RT #4 BOX 330H HOPE, AR 71801	OBG
RUBENSTEIN, MELVIN	522 N NEW 8ALLAS RD STE ST LOUIS, MO 63141	P
RUBIN, ROBT	4585 WASHINGTON ST STE FLORISSANT, MO 63033	IM
RUDI, HERBERT J	3606 GRAVOIS AVE ST LOUIS, MO 63116	GP
RUEHL, ALBERT F	1325 S GRAND ST LOUIS, MO 63104	PS
RUHLING, RUDY	5203 CHIPPEWA ST LOUIS, MO 63109	IM
RUMELT, MICHAEL	BALLAS-PARKWAY MEDICAL 456 N NEW BALLAS RD- CREVE COEUR, MO 63141	OPH
RUSAN, THOS E	2900 S BRENTWOOD ST LOUIS, MO 63144	OBG
RUSSELL, HERMAN E	4451 NATURAL BRIDGE ST LOUIS, MO 63115	ORS
RUWITCH, JOSEPH	6101 QUEENY TOWER ST LOUIS, MO 63110	CD
RYAN, JOHN J	28 RIDGETOP CLAYTON, MO 63117	GP
RYAN, RO8ERT E JR	621 S. NEW BALLAS RD ST. LOUIS, MO 63141	OTO
RYAN, ROBT E	621 S NEW BALLAS RD STE ST LOUIS, MO 63141	OTO
SACHAR, LEO A	4511 FOREST PARK BLVD ST LOUIS, MO 63108	GS
SAFDAR, SHABBIR H	1034 SOUTH BRENTWOOD ST LOUIS, MO 63117	IM

---

* Doctor of Osteopathy

GHIR, MARCEL T P
1034 S BRENTWOOD BLVD S
ST LOUIS, MO 63117
HA, NITAI C U
620 PACKFORD
BALLWIN, MO 6301I
HA, SUDHA R OBG
500 NW PLAZA
ST ANN, MO 63074
IFEE, SALMA US
4911 BARNES HOSPITAL PL
ST LOUIS, MO 63110
KAMOTO, DAN K OPH
1325 S GRAND BLVD
ST LOUIS, MO 63104
LANGA, PERCIVAL B GP
8321 N BROADWAY
ST LOUIS, MO 63147
LE, LLEWELLYN IM
4910 FOREST PARK
ST LOUIS, MO 63108
LINAS, MARIO OBG
1325 S GRAND
ST LOUIS, MO 63I04
LMON, MICKEY L OPH
3916 RITZ CTR
ST LOUIS, MO 63125
MET, JOHN M CD
141 NORTH MERAMEC
SUITE 11
CLAYTON, MO 63105
MMONS, HARRY C AN
128 W JEWEL AVE
KIRKWOOD, MO 63122
MUDRALA, RAMULU OPH
2601 N WHITTIER
ST LOUIS, MO 63139
NCHEZ, ABELARDO B N
4783 WICKERWOOD DR
ST LOUIS, MO 63129
DERS, THEODORE E OPH
100 N EUCLID
ST LOUIS, MO 63108
NDZA, JOSEPH G GS
216 S KINGSHIGHWAY
ST LOUIS, MO 63110
TANELLO, WILLIAM M GP
2525 N BROADWAY
ST LOUIS, MO 63102
NTILLANO, ANTONIO B PTH
2821 N BALLAS RD
ST LOUIS, MO 63I31
NTOS-PARDO, LOURDES PD
801 S. BRENTWOOD BLVD
ST LDUIS, MO 63105
PALA, JOSEPH C PTH
8111 STANFORD
ST LOUIS, MO 63130
SSER, WM F TS
62I S NEW BALLAS RD
ST LOUIS, MO 63141
TA, LINDBERGH S P
325 9TH AVE
SEATTLE, WA 98104
TO, GEO PD
369 HALCYDN DRIVE
ST LOUIS, MO 63I22
TYAM, DASA S AN
1325 S. GRAND
ST. LOUIS, MO 63104
UER, DONALD C GS
4422 WESTMINSTER
ST LOUIS, MO 63I08
UER, W N OTO
OXFORD BUILDING I41 NOR
MERAMEC SUITE 218
ST LOUIS, MO 63105
UVAGE, JACQUES P OBG
4911 BARNES HOSP PLAZA
ST LOUIS, MO 63110
VCI, DOGAN H R
11712 WESTHAM
ST LOUIS, MO 63131
WYER, JAMES OBG
111 CHURCH ST
FERGUSON, MO 63135
CARATO, GARRY R GP
615 S. NEW BALLAS RD
CREVE COEUR, MO 63141
CHAAN, ROBT C PD
6651 CHIPPEWA STE 316
ST LOUIS, MO 63109
CHAEFER, BARRETT A R
777 S NEW BALLAS
ST LOUIS, MO 63141
CHAEFER, GLENNON S GS
1333 TOPPING ROAD
ST LOUIS, MO 63131
CHAERER, JACQUES P NS
777 S NEW BALLAS RD
ST LOUIS, MO 63141
CHAPER, ERNEST H OM
7200 MANCHESTER AVE
ST LOUIS, MO 63117
CHECHTER, SAML E IM
8000 BONHOMME ST
CLAYTON, MO 63105
CHEELE, PAUL M IM
325 N KIRKWOOD ST
KIRKWOOD, MO 63122

SCHEER, GEORGE E ORS
1034 SOUTH BRENTWOOD
ST LOUIS, MO 63105
SCHEFF, HAROLD GE
777 S NEW BALLAS RD
ST LOUIS, MO 63141
SCHEIBE, ROBT G U
777 SO NEW BALLAS RD
ST LOUIS, MO 63141
SCHEIBLE, ROBERT F R
2821 N BALLAS RD
ST LOUIS, MO 63131
SCHENGBER, JOHN S P
12042 CREEKHAVEN DR
ST LOUIS, MO 63131
SCHIERMAN, WM D IM
911 S BRENTWOOD BLVD
CLAYTON, MO 63105
SCHLANSKY, SEYMOUR M PD
677 N NEW BALLAS RD
ST LOUIS, MO 63141
SCHLUER, ELMER P OTO
9 LONG MEADOWS
ST LOUIS, MO 63131
SCHMIDT, C R AN
2301 DORRINGTON
HOUSTON, TX 77030
SCHMIDT, DENNIS A R
6150 OAKLAND
ST LOUIS, MO 63139
SCHMIDT, EDMUND M GP
10513 ROTHWELL DR
ST LOUIS, MO 63136
SCHMIDT, EDWIN H P
665I CHIPPEWA ST
ST LOUIS, MO 63109
SCHMIDT, EDWIN H IM
1035 BELLEVUE AVE
ST LOUIS, MO 63117
SCHMIEMEIER, ROY H GP
7351 WINDCREST DR.
HOUSE SPRINGS, MO 63051
SCHNEIDER, SALLY L AN
62I S. NEW BALLAS RD.
ST. LOUIS, MO 63141
SCHNEIDER, SAM GS
C/O FUNDEMBERG
1015 LOCUST
ST LOUIS, MO 63101
SCHOECK, ALBERT F AN
44 MUIR FIELD
CREVE COEUR, MO 63141
SCHOEDINGER, GEORGE R ORS
12615 OLD TESSON ROAD
ST LOUIS, MO 63128
SCHOENECKER, PERRY L ORS
4989 BARNES HOSPITAL PL
ST LOUIS, MO 63110
SCHOENTAG, JOHN S D
456 N NEW BALLAS RD
SUITE #317
CREVE COEUR, MO 63141
SCHONFELD, GUSTAV IM
507 S EUCLID
ST LOUIS, MO 63110
SCHOPP, ALVIN C ORS
10000 HIGHWAY 366
ST LOUIS, MO 63126
SCHRANCK, CHAS R AN
28 BERKSHIRE
ST LOUIS, MO 63117
SCHREIBER, DAVID J N
11155 DUNN RD
ST LOUIS, MO 63136
SCHUESSLER, WOLFGANG P IM
6744 CLAYTON RD
ST LOUIS, MO 63117
SCHULMAN, JEFFREY PD
657 NORTH MOSLEY RD
ST LOUIS, MO 63141
SCHULTZ, EARL R N
282I N BALLAS RD
ST LOUIS, MO 63131
SCHULTZ, IRWIN IM
26 ARUNDEL PL
ST LOUIS, MO 63105
SCHULTZ, SAML GP
1233 QUANTOCK DR.
ST LOUIS, MO 63125
SCHULZ, RICHARD R
6150 OAKLAND
ST LOUIS, MO 63139
SCHWARTZ, HENRY G NS
600 S KINGSHIGHWAY
ST LOUIS, MO 63110
SCHWARTZ, HOWARD OS
60I S. BRENTWOOD
ST. LOUIS, MO 63I05
SCHWARTZ, MELVIN M OBG
282I N BALLAS
ST LOUIS, MO 63131
SCHWARTZMAN, BERNARD PD
15I2 BEDFORD FORGE DR
CHESTERFIELD, MO 63017
SCHWARZ, LUIS H P
1035 BELLEVUE AVE
ST LOUIS, MO 63117
SCHWEISS, JOHN F AN
14I4 WEST WIND
ST LOUIS, MO 63I31

SCIORTINO, JOHN S GS
3654 S GRAND BLVD-STE 2
ST LOUIS, MO 63118
SCOPELITE, JOS A GP
607 N GRAND BLVD
ST LOUIS, MO 63103
SCOTT, ELWIN P GP
3325 S GRAND
ST LOUIS, MO 63118
SCOTT, HORACE W R
2639 MIAMI
ST. LOUIS, MO 63118
SEABAUGH, OTTIS D GP
1512 BEDFORD FORGE DR
CHESTERFIELD, MO 63017
SEED, JOHN P
11 S MERAMEC
ST LOUIS, MO 63105
SEELEY, JAMES J GS
6651 CHIPPEWA
ST LOUIS, MO 63109
SEIB, GEO A GP
2323 LAFAYETTE AVE
ST LOUIS, MO 63104
SELVADURAI, PAUL N PUD
2838 S. GRAND BLVD.
ST. LOUIS, MO 63I18
SENTURIA, BEN H OTO
4949 FOREST PARK
ST LOUIS, MO 63108
SENTURIA, HYMAN R R
4511 FOREST PARK AVE
ST LOUIS, MD 63108
SERTL, GEORGE O ORS
777 S NEW BALLAS RD
ST LOUIS, MO 63141
SERTL, JAMES F IM
950 FRANCIS PL
ST LOUIS, MO 63105
SERTL, JOHN D GP
5203 CHIPPEWA
SUITE 307
ST LOUIS, MO 63109
SESSIONS, DONALD G GS
1960 GRASSY RIDGE RD
KIRKWOOD, MO 63122
SETHABUTRA, CHAISIRI OPH
963 PROSPECT
OLEAN, NY I4760
SETHABUTRA, YOLVILAI PD
963 PROSPECT
OLEAN, NY 14760
SEVASTIANOS, ARISTIDES E GP
7521 W FLORISSANT AVE
ST LOUIS, MO 63136
SEXTON, DANL L IM
9I1 S BRENTWOOD BLVD
CLAYTON, MO 63105
SEXTON, ELMER E U
2537 TOWN & COUNTRY LAN
ST LOUIS, MO 63131
SHAH, ANWAR OPH
1035 BELLEVUE AVE
ST LOUIS, MO 63117
SHAH, BHARAT K GS
221 BROOKTRAIL CT
ST LOUIS, MO 6314I
SHAH, HANSA J PTH
148 AMBLESIDE LA
ST LOUIS, MO 63141
SHAH, JITENDRA U
10004 KENNERLY RD
ST LOUIS, MO 63I28
SHAH, NAHEED F OPH
1325 S GRAND BLVD
ST LOUIS, MO 63104
SHAHAN, PHILIP T OPH
211 N MERAMEC
ST LOUIS, MO 63I05
SHAIKUN, GERALD L R
4511 FOREST PARK
ST LOUIS, MO 63108
SHANAHAN, PHILIP J GP
1 CHILTON LN
CREVE COEUR, MO 63141
SHANER, THOS P OBG
2821 NORTH BALLAS
ST LOUIS, MO 63131
SHANK, ROBT E IM
4566 SCOTT AVE
ST LOUIS, MO 63110
SHAPIRO, HERBERT N GS
6651 CHIPPEWA ST
ST LOUIS, MO 63109
SHAPLEIGH, JOHN B IM
1034 S BRENTWOOD BLVD S
ST LOUIS, MO 63117
SHARP, AUSTIN R PD
901 CLAYTON RD
BALLWIN, MO 630I1
SHATZ, BURTON A GE
10287 CLAYTON RD
ST LOUIS, MO 63I24
SHAW, EDWARD J GS
3654 SOUTH GRAND BLVD
ST LOUIS, MO 63I18
SHAW, RICHARD C GS
216 S KINGSHIGHWAY
ST LOUIS, MO 63110

SHEA, JOHN F NS
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
SHEFFIELD, WM H PTH
135 W ADAMS
ST LOUIS, MO 63122
SHELTON, EARL W IM
4451 NATURAL BRIDGE AVE
ST LOUIS, MO 63115
SHEN, HANG C R
273 PRINCE TOWNE
ST LOUIS, MO 63141
SHEN, JEROME T PD
1695 S BRENTWOOD BLVD
ST LOUIS, MO 63144
SHERIDAN, EDMUND R GP
1755 S GRAND AVE
ST LOUIS, MO 63104
SHERIDAN, JOHN J ORS
6651 CHIPPEWA ST
ST LOUIS, MO 63109
SHERMAN, WARREN G PD
10004 KENNERLY
ST LOUIS, MO 63128
SHERWIN, CHAS S GS
3971 FLORA PL
ST LOUIS, MO 63110
SHIEBER, WM GS
216 S KINGSHIGHWAY BLVD
ST LOUIS, MO 63110
SHIELDS, JOHN B R
33 FLOWER HILL CT
ST LOUIS, MO 63122
SHOBE, FRANK O P
1034 S BRENTWOOD BLVD S
ST LOUIS, MO 63117
SHUFF, PAUL D OTO
1035 BELLVUE STE 417
ST LOUIS, MO 63117
SHUMAN, JOS S P
DE PAUL MEDICAL BLDG
12255 DE PAUL DR SUI
BRIDGETON, MO 63044
SHYKEN, HERMAN R
141 N MERAMEC
CLAYTON, MO 63105
SIDDIQUI, FARZANNA Q P
1550 A ST CLAIR AVE
GRANITE CITY, IL 62040
SIDDIQUI, JAWED H IM
11115 NEW HALLS FERRY
#301
FLORISSANT, MO 63033
SIDDIQUI, M Y GS
2601 N. WHITTIER ST
ST. LOUIS, MO 63113
SIEGFRIED, BARRY PTH
BARNES HOSP DIV. OF LAB MED.
ST. LOUIS, MO 63110
SIEMERS, GEO E OBG
12660 LAMPLIGHTER SQUAR
ST LOUIS, MO 63128
SIESENER, HERBERT H IM
NORTHLAND MED BLDG STE
ST LOUIS, MO 63136
SIGMUND, CHAS A OPH
12255 DE PAUL RD
SUITE 645
BRIDGETON, MO 63044
SIGNORELLI, ANDREW J US
12634 OLIVE ST RD
ST LOUIS, MO 63141
SILBER, SHERMAN J U
456 NO N BALLAS RD
ST LOUIS, MO 63141
SILVA, VICTOR A PTH
RES CHAMA 9-B
AVE 3-C #617-125
MARACAIBO VENEZ, LA 70935
SILVER, BERND OPH
211 NORTH MERAMEC
ST LOUIS, MO 63105
SILVERBERG, CHAS IM
10004 KENNERLY RD
SUITE 315
ST LOUIS, MO 63128
SILVERMINTZ, SAUL D IM
20 GRANADA WAY
ST LOUIS, MO 63124
SIMON, DAVID L PD
7809 GANNON
ST LOUIS, MO 63130
SIMON, JEROME I GS
12 WESTRIDGE CT
ST LOUIS, MO 63124
SIMON, NATHAN M PH
32 CRESTWOOD
ST LOUIS, MO 63105
SIMONS, PAUL S PD
4570 AUDUBON
ST LOUIS, MO 63110
SIMOWITZ, FREDRIC M N
2821 N BALLAS RD
ST LOUIS, MO 63131
SIMPSON, JOSEPH IM
4511 FOREST PARK
ST. LOUIS, MO 63108
SIMRIL, WAYNE A DR
21 SOMERSET DOWNS
ST LOUIS, MO 63124

SIMS, WM A AN
6 GREENBRIAR LANE
ST LOUIS, MO 63124
SINGER, PAUL R OPH
660 S. EUCLID
ST. LOUIS, MO 63110
SINGHAL, GOKUL C IM
6500 CHIPPEWA AVE
ST LOUIS, MO 63109
SINGHAL, RENU PD
4524 TARLTON DR
ST LOUIS, MO 63128
SINSAKUL, VICHIEN IM
1325 S GRAND BLVD
ST LOUIS, MO 63104
SIRISUWANANGKURA, S IM
VA MEDICAL CENTER
LAKE CITY, FL 32055
SISK, CLARK D
1442 SW DAVENPORT
PORTLAND, OR 97201
SISK, JAMES C D
121 N BRENTWOOD BLVD
CLAYTON, MO 63105
SISLEN, DONALD R IM
621 S NEW BALLAS ROAD
ST LOUIS, MO 63141
SISSON, RICHARD G GS
4511 FOREST PARK BLVD
ST LOUIS, MO 63108
SKEFFINGTON, MARY J OPH
CLAYTON HOUSE RETIREMEN
1251 E CLAYTON RD
MANCHESTER, MO 63011
SKILLING, DAVID M PUD
610 S BERRY RD
ST LOUIS, MO 63122
SKIMMING, W L ORS
621 S NEW BALLAS RD
ST LOUIS, MO 63141
SKINNER, JOHN S IM
35 N CENTRAL
ST LOUIS, MO 63105
SLAVIN, RAYMOND G A
1402 SOUTH GRAND
ST LOUIS, MO 63104
SLETTEN, IVAN W P
11155 DUNN RD
ST LOUIS, MO 63136
SLIOM, CYRIL M AN
DEPT ANESTHESIOLOGY
JEWISH HOSPITAL
ST LOUIS, MO 63178
SLY, WM S OS
500 S KINGSHIGHWAY BLVD
ST LOUIS, MO 63110
SMILEY, WM L OBG
2715 UNION BLVD
ST LOUIS, MO 63113
SMIT, HERBERT M OTO
8724 W KINGBURY
ST LOUIS, MO 63124
SMITH, BENJ F OBG
5 FORDYCE MANOR
ST LOUIS, MO 63131
SMITH, DERMOTT A P
1221 S GRAND BLVD
ST LOUIS, MO 63104
SMITH, EMILY L DR
510 S KINGS HIGHWAY
ST LOUIS, MO 63110
SMITH, GARLAND F ORS
621 S NEW BALLAS RD
ST LOUIS, MO 63141
SMITH, HERBERT P GP
2265 FLORIDA MANGO RD
WEST PALM BEACH, FL 33406
SMITH, HUGH R OBG
6651 CHIPPEWA
ST LOUIS, MO 63109
SMITH, JAMES B P
35 NORTH CENTRAL
ST LOUIS, MO 63105
SMITH, JOHN E PH
4336 FOREST DE VILLE
ST LOUIS, MO 63129
SMITH, KATHLEEN P
.1420 GRATTAN ST
ST LOUIS, MO 63104
SMITH, KENNETH R NS
1325 S GRAND BLVD
ST LOUIS, MO 63104
SMITH, KEVIN B FP
14382 WOODLAKE DR
CHESTERFIELD, MO 63017
SMITH, MORTON E OPH
660 S EUCLID ST
ST LOUIS, MO 63110
SMITH, NORRIS W OBG
3654 S GRAND BLVD
ST LOUIS, MO 63118
SMITH, ROBT W R
10010 KENNERLY RD
ST LOUIS, MO 63128
SMITH, SIDNEY E IM
2715 UNION ST
ST LOUIS, MO 63113
SOBKY, GEORGE R
1826 WATERFORD RIDGE ROAD
MANCHESTER, MO 63011

SOHN, RICHARD N
4989 BARNES HOSPITAL PL
ST LOUIS, MO 63110
SOLLEY, ROBT F I
236 WEST CHANNEL RD.
SANTA MONICA, CA 90402
SOLOMON, FELIX G A
11326 MOSLEY LANE
ST LOUIS, MO 63141
SOMBUN, TIRDKIAT O
1401 HILLCREST DR.
MENDOTA, IL 61342
SOMMER, CONRAD S P
200 S. HANLEY RD.
SUITE 700
ST LOUIS, MO 63105
SOMMER, ROSS B I
1034 S BRENTWOOD ST
ST LOUIS, MO 63117
SOORYA, NARENDIR T P
6651 CHIPPEWA
ST LOUIS, MO 63109
SOPUCH, JOHN A O
500 NORTHWEST PLAZA
ST ANN, MO 63074
SOSNA, JACOB P I
6651 CHIPPEWA
ST LOUIS, MO 63109
SOTO, ALBERT A P
522 N NEW BALLAS RD
ST LOUIS, MO 63141
SOULE, SAML D O
911 S BRENTWOOD
ST LOUIS, MO 63105
SPALDING, DONALD G R
621 S NEW BALLAS RD
ST LOUIS, MO 63141
SPECTOR, GENE W R
4511 FOREST PARK AVE
ST LOUIS, MO 63108
SPECTOR, GERSHON O
517 SOUTH EUCLID
ST LOUIS, MO 63110
SPENO, ANGELO A O
1001 N HIGHWAY DRIVE
FENTON, MO 63026
SPINZIG, EDGAR W R
5 HAWBROOK LANE
KIRKWOOD, MO 63122
SPITZ, MILTON A I
1901 LINCOLN PK W
CHICAGO, IL 60614
SPIVACK, ALAN R I
10511 OLD OLIVE ST RD
ST LOUIS, MO 63141
SPOENEMAN, MARLIN C G
4421 NE 25TH AVE
LIGHTHOUSE POIN, FL 33064
SPRAUL, JAMES H O
800 NO LINDBERGH
ST LOUIS, MO 63166
SQUITIERI, ALPHONSE J I
9616 LACKLAND AVE
ST LOUIS, MO 63114
SRIKRISHNA, SIRIVELLA G
3015 N BALLAS RD
ST LOUIS, MO 63131
SRIVISAL, SOMNUK R
1877 SCHOETTLER VALLEY
CHESTERFIELD, MO 63017
ST JOHN, THOMAS C O
10017 CHARDINWAY
APT 2
ST LOUIS, MO 63128
STAFFORD, WALTER R O
141 N MERAMEC AVE
CLAYTON, MO 63105
STANCZYK, DENNIS J G
301 W LINCOLN STE 57
BELLEVILLE, IL 62220
STANFIELD, NED M A
8048 BLACKBERRY AVE
UNIVERSITY CITY, MO 63130
STANLEY, ROBT J R
510 S KINGSHIGHWAY
ST LOUIS, MO 63110
STARKLOFF, GENE B G
558 S. GEYER RD.
C/O C BURKE
ST LOUIS, MO 63122
STARKLOFF, MAX I
6304 S GRAND AVE
ST LOUIS, MO 63111
STAVRIDES, PETE D O
1325 S. GRAND BLVD.
ST. LOUIS, MO 63104
STEELE, JACK T US
3466 BRIDGELAND
SUITE 110
BRIDGETON, MO 63044
STEIN, ARTHUR H US
4989 BARNES HOSP PLAZA
ST LOUIS, MO 63110
STEIN, HARRY J G
6917 W FLORISSANT
JENNINGS, MO 63136
STEIN, PAUL M I
777 SOUTH NEW BALLAS RD
ST LOUIS, MO 63141

STEINBERG, FRANZ U 216 SOUTH KINGSHIGHWAY ST LOUIS, MD 63110	PM
STEINER, ALEXANDER J 141 N MERAMEC AVE STE 2 CLAYTDN, MD 63105	PUD
STEPHEN, CHAS R UNIV OF WASH SCH MED ST LOUIS, MD 63110	AN
STEPHENS, LE R 7937 BIG BEND BLVD WEBSTER GROVES, MO 63119	PD
STEPHENS, WM A RT 3 BOX 141 KEHRS MILL RD CHESTERFIELD, MO 63017	ORS
STERGEN, NICK E 5647 BERMUDA DR ST LOUIS, MO 63121	OBG
STERKEL, RICHARD L 1035 BELLEVUE ST LOUIS, MO 63117	IM
STESKA, STEPHEN J 6504 HOFFMANN ST LOUIS, MO 63139	OS
TEWART, FRANCES H 7161 DELMAR BLVD ST LOUIS, MO 63130	OBG
TICKLE, ARTHUR W 135 W ADAMS KIRKWOOD, MO 63122	OPH
TICKLEY, LOUIS P 621 S NEW BALLAS RD ST LOUIS, MO 63141	CD
STILLINGS, WAYNE 1034 S BRENTWOOD SUITE 1160 ST LOUIS, MO 63117	P
STINDEL, CHAS E 341 VIOLET LANE ST LOUIS, MO 63119	OM
STOHR, PAUL E 1035 BELLEVUE AVE ST LOUIS, MO 63117	NS
STOKES, JAMES M 5505 DELMAR BLVD ST LOUIS, MO 63112	GS
TOLIAR, BRUCE 11115 NEW HALLS FERRY FLORISSANT, MO 63033	U
STONEMAN, WM 5217 WESTMINSTER PL ST LOUIS, MO 63108	PS
STRADER, RICHARD P 621 SOUTH NEW BALLAS RD ST LOUIS, MO 63141	AN
STROBACH, KURT F 3394 MC KELVEY ROAD BRIDGETON, MO 63044	OBG
STROMINGER, DONALD B 4989 BARNES HOSP PLAZA- ST LOUIS, MO 63110	PDA
STRONSKY, DAVID 12166 BIG BEND 8LVD ST LOUIS, MO 63122	ORS
STROUD, MALCOLM H 517 SOUTH EUCLID ST LOUIS, MO 63110	OTO
STRYKER, GAROLD.V #1 GULF MANOR DR VENICE, FL 33595	OS
STRYKER, WM I 12 OAKLEIGH LANE ST LOUIS, MO 63124	P
STUART, WALLACE 10000 HWY 366 CRESTWOOD, MO 63126	D
STUEBNER, ROLAND W 11964 ADORONO PLACE SAN DIEGO, CA 92128	GS
UBA, ANTONIO R 141 N MERRAMEC AVE ST LOUIS, MO 63105	GS
UDEKUM, ANN 2821 N BALLAS ST LOUIS, MO 63131	PD
UDEKUM, JOSEPH M 841 CHAPEL OAKS ST LOUIS, MO 63131	ORS
UDHOLT, ALFRED F 500 NORTHWEST PLAZA STE ST ANN, MO 63074	OBG
ULLIVAN, CLEMENT J 6744 CLAYTON RD RM 311 ST LOUIS, MO 63117	IM
ULLIVAN, WM K #23 CONWAY LANE ST LOUIS, MO 63124	AM
ULLIVAN, WM W 12166 BIG BEND BLVD KIRKWOOD, MO 63122	IM
UMER, CENGIZ M 220 RUNNYMEDE DR ST LOUIS, MO 63141	P
UMER, EMEL A 220 RUNNYMEDE DR ST LOUIS, MO 63141	CHP
UMMERS, JOHN B 10349 WATSON RD ST LOUIS, MO 63127	PD
SUMMERS, THOS F #100 N EUCLID P O BOX 23053 ST LOUIS, MO 63156	GP
SUNDERMAN, RAYMDND C 1600 MONTICELLO DR ST LDUIS, MO 63138	IM
SUNSHINE, HERBERT 707 WAYFIELD ST LOUIS, MO 63132	U
SUSMAN, NOAH 4511 FOREST PARK AVE ST LOUIS, MO 63108	R
SUTTER, RICHARD A 819 LOCUST ST ST LOUIS, MO 63101	OM
SVANCAREK, WM P 408 OLD MERAMEC STA RD MANCHESTER, MO 63011	OS
SWAYKUS, BERNARD T 3394 MC KELVEY RD BRIDGETON, MO 63044	IM
SWEET, HERBERT C 3 ST JAMES COURT WEBSTER GROVES, MO 63119	PUD
SWOPE, JOS A 10D04 KENNERLY ST LOUIS, MO 63128	IM
SYLVANOVICH, W R ST JOHNS MERCY MED CTR 615 SOUTH NEW BALLAS ST LOUIS, MO 63141	GE
TALABAN, RAYMUNDO D 703 W MAIN FREDERICKTOWN, MO 63645	GS
TAN, CHAS H 9293 WATSON RD ST LOUIS, MO 63126	IM
TANAKA, GEO M 59 GRASSO PLAZA ST LOUIS, MO 63123	IM
TANGSHEWINSIRIKUL, P HACKENSACK HOSP HACKENSACK, NJ 07601	R
TAPPER, STEVEN 1301 KENDON DR ST LOUIS, MO 63131	U
TASHMA, SIGMUND S 904 DALKEITH LANE ST LOUIS, MO 63132	US
TATKOW, ROBERT W 456 N NEW BALLAS SUITE 369 ST LOUIS, MO 63141	ORS
TAUSSIG, BARRETT L 513 PAMELA LANE ST LOUIS, MO 63122	IM
TAUTE, HERMANN 2821 N BALLAS RD ST LOUIS, MO 63131	OBG
TAYLOR, EUGENE D 2715 N UNION ST LOUIS, MO 63113	OBG
TAYOB, ANVER A 1325 S GRAND BLVD ST LOUIS, MO 63104	ORS
TEIBER, FREDERICK W 38 FAIR OAKS ST LOUIS, MO 63124	OM
TEKWANI, HIRALAL T 3555 SUNSET OFFICE DR ST LOUIS, MO 63127	OPH
TEMPORAL, ADELAIDE 10048 HILLTOP DR ST LOUIS, MO 63128	IM
TEMPORAL, JOSE A 12660 LAMPLIGHTER SQ ST LOUIS, MO 63128	OS
TEPPER, ARNOLD 777 S NEW BALLAS RD ST LOUIS, MO 63141	IM
TERNBERG, JESSIE L 4960 AUDUBON AVE ST LOUIS, MO 63110	GS
TESS, ALLEN F 1245 GRAHMA RD STE 411 FLORISSANT, MO 63031	OPH
TESS, MELVIN J 1501 SWITZER AVE ST LOUIS, MO 63147	PH
THALE, THOS R 1221 S GRAND ST LOUIS, MO 63104	P
THAWLEY, STANLEY BARNES HOSPITAL PLAZA ST LOUIS, MO 63110	OTO
THIEL, JOHN A 621 SOUTH NEW BALLAS RD ST LOUIS, MO 63141	D
THIELE, BELMONT R 4511 FOREST PARK ST LOUIS, MO 63108	GS
THIERAUF, CHAS G 9444 SUNNY CREEK ST LOUIS, MO 63127	R
THOMA, GEO E 3556 CAROLINE ST LOUIS, MO 63104	IM
THDMAS, GRACY 2601 WHITTIER ST LOUIS, MO 63113	R
THOMAS, LEWIS J 700 S EUCLID ST-B10 COM ST LDUIS, MO 63110	AN
THOMASSON, MARY W 525 ST FRANCOIS PLACE FLORISSANT, MO 63031	R
THOMPSON, MERLYN B 522 N NEW BALLAS RD ST LOUIS, MO 63141	OBG
THURMANN, MANFRED 950 ST FRANCIS PL ST LOUIS, MO 63105	CD
THURSTON, DONALD L 500 SO KINGSHIGHWAY ST LOUIS, MO 63110	PD
THYM, HENRY P 436 CORONADO DR BALLWIN, MO 63011	GS
TICHENOR, ROBT W BOX 8568 SAPPINGTON STA ST LOUIS, MO 63126	GP
TILLMAN, ERNEST 800 N. LINDBERGH ST. LOUIS, MO 63141	OM
TILLMAN, MARY A 4511 FOREST PARK SUITE 201 ST LOUIS, MO 63108	PD
TINDALL, ROBT N 6651 CHIPPEWA ST RM 306 ST LOUIS, MO 63109	OTO
TIPPETT, JACK C 6651 CHIPPEWA ST ST LOUIS, MO 63109	ORS
TJOFLAT, OLIVER E 252 WOODBOURNE DR ST LOUIS, MO 63105	GP
TOMLINSON, WM L 15049 CLAYMOOR CT APT #7 CHESTERFIELD, MO 63017	GS
TONELLI, GEO L 5723 NEOSHO ST LOUIS, MO 63109	OTO
TOOMEY, JAMES M 517 S EUCLID ST LOUIS, MO 63110	PS
TORIN, BERNICE A 951 OLD BONHOMME ST LOUIS, MO 63132	OBG
TORO, ENRIQUE F 3555 SUNSET OFFICE DR ST LOUIS, MO 63127	IM
TREIMAN, ROBT C 7 RADNOR RD ST LOUIS, MO 63131	IM
TRIGG, JOSEPH F OCEAN REEF CLUB 13 CALOOSA RD KEY LARGO, FL 33037	GP
TRISKA, ROLAND A 12166 BIG BEND BLVD KIRKWOOD, MO 63122	PD
TROTTA, PHILIP C 4511 FOREST PARK BLVD ST LOUIS, MO 63108	DR
TROTTER, FRANCIS O 6150 OAKLAND ST LOUIS, MO 63139	R
TRUEBLOOD, ALVA C 325 N KIRKWOOD RD ST LOUIS, MO 63122	OBG
TRUGLY, EDITH S 12 HACIENDA DR ST LOUIS, MO 63124	P
TRUNKO, LEO 1900 TELEGRAPH RD ST LOUIS, MO 63125	IM
TSCHOE, BJONG-SUHN 1035 BELLEVUE AVE ST LOUIS, MO 63117	PS
TSCHUDIN, GARLAND 2744 RUSSELL ST LOUIS, MO 63104	US
TSIFUTIS, ARGYRIOS A 2915 TRAFALGAR DE TOWN AND COUNTR, MO 63131	PD
TUANO, ANGELO 2601 N WHITTIER ST LOUIS, MO 63113	GS
TUCKER, EUGENE F 6420 CLAYTON RD ST LOUIS, MO 63117	PTH
TUCKER, GEO L 4989 BARNES HOS PL 6107 ST LOUIS, MO 63110	GS
TUMIALAN, LUIS 2639 MIAMI ST ST LOUIS, MO 63110	PTH
TURGEON, RONALD P 642D CLAYTON RD ST LOUIS, MO 63117	PTH
TURNER, JAMES K 4570 AUDUBON AVE ST LOUIS, MO 63110	PD

*TURNER, TIMOTHY T OS
12135 ROYAL VALLEY DR
CREVE COEUR, MO 63141
TURNG, SHU Y PD
2601 N WHITTIER
ST LOUIS, MO 63113
TWEDELL, DONALD L OM
7544 W FLORISSANT
ST LOUIS, MO 63136
UHLEMEYER, HENRY A OTO
5203 CHIPPEWA ST
ST LOUIS, MO 63109
ULETT, GEO A P
500 SUSAN RD
ST LOUIS, MO 63129
ULETT, PEARL C CHP
B01 S BRENTWOOD BLVD
ST LOUIS, MO 63105
UMAR, IBRAHIM S PD
1515 LAFAYETTE AVE
ST LOUIS, MO 63104
UNGVARI, JOS C GS
6500 CHIPPEWA STE 107
ST LOUIS, MO 63109
UPADHYAYA, D M OBG
1706 PENSACOLA
ST LOUIS, MO 63141
UTLEY, JAMES IM
3737 N KINGSHIGHWAY BLV
ST LOUIS, MO 63115
VACCA, JOS B IM
3915 WATSON RD
ST LOUIS, MO 63109
VADLAMAN1, S GS
6651 CHIPPEWA, SUITE 21B
ST LOUIS, MO 63109
VAKASSI, N PTH
716 HANLEY INDUSTRIAL CT.
ST. LOUIS, MO 63144
VALACH, FRANK J OBG
2821 N BALLAS RD
ST LOUIS, MO 63131
VALDES, ORESTES S PD
1526 BOOKBINDER DR
ST LOUIS, MO 63141
VALKO, ROBERT J P
1245 GRAHAM RD
SUITE 301
FLORISSANT, MO 63031
VALTIERRA, CESAR A P
6744 CLAYTON RD
ST LOUIS, MO 63117
VAN GOIDSENHOVEN, GUY E GE
1035 BELLVUE
ST LOUIS, MO 63117
VAN MATRE, REBER M P
1436 SHERIDAN ST NW
WASHINGTON, DC 20011
VAN NORMAN, ROBT T PS
6651 CHIPPEWA
ST LOUIS, MO 63109
VANDIVORT, PAUL M P
1221 S GRAND
ST LOUIS, MO 63104
VANDOVER, JOHN T GP
3 GRANTWOOD LANE
ST LOUIS, MO 63123
VARDELEON, ROGELIO V GS
327 CONWAY LAKE DR
ST LOUIS, MO 63141
VARGAS, JAIME P
1000 WATSON RD
CRESTWOOD, MO 63126
VARGAS, TEODORO GP
319 N FIRST ST
PACIFIC, MO 63069
VATTEROTT, PAUL B GP
55 CHAMINADE DR
ST LOUIS, MO 63141
VATTEROTT, PAUL B JR IM
456 N NEW BALLAS
ST LOUIS, MO 63141
VAUGHAN, J R OBG
940 GOLF COURSE DR
ST LOUIS, MO 63132
VAUGHN, LEROY W OPH
107 BLOSSOMCREST
LEXINGTON, MA 02173
VELASCO, ERNESTO T US
1704 S BROADWAY
ST LOUIS, MO 63104
VELUZ, BENITO I IM
5203 CHIPPEWA
ROOM 209
ST LOUIS, MO 63109
VENTUS, MANUEL A GS
B321 N BROADWAY
ST LOUIS, MO 63147
VERDE, JULIAN N R
9806 MEADOWFERN DR
ST LOUIS, MO 63126
VEST, JAMES C TS
12255 DE PAUL DR STE 15
ST LOUIS, MO 63044
VIAMONTES, GLORIA E CHP
1360 SOUTH 5TH ST SUITE
ST CHARLES, MO 63301
VIAMONTES, JORGE A P
777 S NEW BALLAS RD
ST LOUIS, MO 63141
VIANZON, ELIZABETH R OBG
14356 RAINY LAKE DR
CHESTERFIELD, MO 63017
VICKAR, GARRY M P
1245 GRAHAM RD RM 506
FLORISSANT, MO 63031
VIDHEECHAROEN, SOMBOON OS
1225 GRAHAM RD
FLORISSANT, MO 63031
VIERS, WAYNE A OTO
135 W ADAMS
ST LOUIS, MO 63122
VIJUNGCO, HERMINIA D AN
115 LADUE LAKE DR
CREVE COEUR, MO 63141
VILAR, PIO M GS
4211 BAYLESS
ST LOUIS, MO 63123
VILLAFUERTE, NILA A AN
1116 CANTINA DRIVE
ST LOUIS, MO 63141
VILLAFUERTE, RENATO G PTH
12563 HIBLER WOODS
ST LOUIS, MO 63141
VILLAMAR, ELIZABETH N OBG
14227 RELLFOOT LAKE DR
CHESTERFIELD, MO 63017
VILLARAMA, ANTONIO P GS
12B64 TOPPING MEADOWS
ST LOUIS, MO 63131
VILORIA, ALBERTO B GS
10260 OLDE MILLING RD
ST LOUIS, MO 63131
VIRAGHATY, JULIUS G US
OLD STATE RD
RR BOX 58
GLENCOE, MO 63038
VIRANT, JOHN A OTO
119 SPOEDE RD
ST LOUIS, MO 63141
VITALE, ANTHONY J GP
7150 NATURAL BRIDGE RD
ST LOUIS, MO 63121
VITALE, NICHOLAS S GP
614 COACHLIGHT LANE
HAZELWOOD, MO 63042
VITALE, THOMAS J GS
6226 LORAN
ST LOUIS, MO 63109
VITT, EDWIN F GS
16 HAMPTON VILLAGE
ST LOUIS, MO 63109
VIVIANO, JOS G OBG
16 HAMPTON VILLAGE
ST LOUIS, MO 63109
VOLLMAR, LEWIS C D
10004 KENNERLY RD
ST LOUIS, MO 63128
VOTAW, ROBT E OTO
10 WARSON TERRACE
ST LOUIS, MO 63124
VOURNAS, CHRISTOPHER G IM
12255 DE PAUL DR SUITE
BRIDGETON, MO 63044
WACKER, LEO L GP
3563 RITZ CENTER DR
ST LOUIS, MO 63125
WAGAN, PRIMITIVA C CD
300 S GRAND
ST LOUIS, MO 63103
WAGNER, JOHN R ORS
777 S NEW BALLAS RD
ST LOUIS, MO 63141
WALD, STANLEY M IM
4511 FOREST PARK BLVD
ST LOUIS, MO 6310B
WALENTIK, CORINNE PD
ST. MARY'S HEALTH CENTER
6420 CLAYTON RD.
ST LOUIS, MO 63117
WALKER, FRANCIS S NS
1035 BELLEVUE AVE
ST LOUIS, MO 63117
WALKER, HARVEY IM
138 N MERAMEC AVE
CLAYTON, MO 63105
WALKER, J L OBG
522 N NEW BALLAS RD
CREVE COEUR, MO 63141
WALKER, WILLARD B GS
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
WALL, EMMETT D IM
5B23 NOESHO
ST LOUIS, MO 63109
WALL, LESTER E PDA
12166 BIG BEND BLVD
KIRKWOOD, MO 63122
WALLACK, MARC K GS
4960 AUDUBON AVE
ST LOUIS, MO 63110
WALSH, JAMES W IM
1034 S BRENTWOOD BLVD
ST LOUIS, MO 63117
WALTER, KENNETH E CD
918B RUSTICWOOD TRAIL
ST LOUIS, MO 63126
WALTER, WM L OP
135 W ADAMS
ST LOUIS, MO 63122
WALTERS, HAROLD E OM
6828 OAKLAND
ST LOUIS, MO 63139
WALTERS, HENRY W D
35 N CENTRAL AVE
CLAYTON, MO 63105
WALTERS, RICHARD C US
7511 BIG BEND BLVD
WEBSTER GROVES, MO 63119
WALTHER, ROY A OB
9440 MIDLAND
ST LOUIS, MO 63114
WALTMAN, STEPHEN R OP
342 MAGNA CARTA DR
ST LOUIS, MO 63141
WALTON, FRANKLIN E GS
25 CLERMONT LANE
ST LOUIS, MO 63124
WALZ, BRUCE J TR
510 S KINGSHIGHWAY BLVD
ST LOUIS, MO 63110
WANLESS, ROBERT C PS
1035 BELLEVUE AVE.
ST. LOUIS, MO 63117
WARD, ROBT L OS
11002 THOUSAND OAKS DR
ST LOUIS, MO 63136
WARREN, JAMES C OBG
4911 BARNES HOSP
ST LOUIS, MO 63110
WASHINGTON, WALTER GS
3400 N KINGSHIGHWAY BLV
ST LOUIS, MO 63115
WASSERMAN, HELMAN C OBG
911 S BRENTWOOD BLVD
ST LOUIS, MO 63105
WATERS, HUGH R IM
5505 DELMAR BLVD SUITE
ST LOUIS, MO 63112
WATKINS, GAREY L OPH
2715 UNION BLVD
ST LOUIS, MO 63113
WAXELMAN, ROGER J PD
309 MANCHESTER RD
MANCHESTER, MO 63011
WAYNE, SHERWYN J ORS
12166 BIG BEND RD
ST LOUIS, MO 63122
WEBB, PAUL B OPH
6651 CHIPPEWA ST
ST LOUIS, MO 63109
WEBBER, WM B PS
1035 BELLEVUE AVE
ST LOUIS, MO 63117
WEBER, J R ORS
12166 BIG BEND RD
ST LOUIS, MO 63122
WEBER, RAYMOND K FP
615 S. NEW BALLAS
ST. LOUIS, MO 63141
WEBER, SOL IM
827 S HANLEY RD
CLAYTON, MO 63105
WEE, GEO C GP
1033 MANCHESTER RD
ELLISVILLE, MO 63011
WEEKS, PAUL M PS
4960 AUDUBON AVE
ST LOUIS, MO 63110
WEILER, THOS J OS
615 SOUTH NEW BALLAS RD
ST LOUIS, MO 63141
WEINHAUS, ROBT S P
86B ALBEY LANE
ST LOUIS, MO 63132
WEIR, DON C R
625 SHERWOOD DR
ST LOUIS, MO 63119
WEIR, ROYAL A GS
1012 CLA TER RI DR
BALLWIN, MO 63011
WEIS, LANDY PTH
11133 DUNN RD.
ST LOUIS, MO 63136
WEISMAN, RENATE D OBG
500 NORTHWEST PLAZA
SUITE 411
ST ANN, MO 63074
WEISS, ALAN N CD
4989 BARNES HOSP PLAZA
SUITE 3103
ST LOUIS, MO 63110
WEISS, HOWARD N
141 N MERAMEC AVE
ST LOUIS, MO 63105
WEISS, STUART N
49B9 BARNES HOSP PLAZA
ST LOUIS, MO 63110
WELDON, CLARENCE S TS
SUITE 3108 QUEENY TOWER
49B9 BARNES HOSP PLZ
ST LOUIS, MO 63110
WELDON, VIRGINIA V IM
500 S KINGSHIGHWAY
ST LOUIS, MO 63110

---

* Doctor of Osteopathy

ELGUS, HOWARD G 109 OLD OAK BALLWIN, MO 63011	D
ELNER, AMOS 4940 AUDUBON ST LOUIS, MO 63110	P
ELNER, ZILA 500 S KINGSHIGHWAY ST LOUIS, MO 63110	P
ELSH, LAURENCE C 1930 UNION RD ST LOUIS, MO 63125	GP
ENNEKER, ALVIN S 8112 DELMAR BLVD ST LOUIS, MO 63130	IM
ENTZEL, LOUIS R P. O. BOX 17133 WICHITA, KS 67217	US
ERNER, WM A 6651 CHIPPEWA ST LOUIS, MO 63109	IM
EST, JOS W 135 W ADAMS ST ST LOUIS, MO 63122	OTO
ESTERMAN, ROBT N 1035 BELLEVUE AVE ST LOUIS, MO 63117	GS
ESTRUP, ELLSWORTH A 8540 BIG BEND RD WEBSTER GROVES, MO 63119	GP
EYERICH, LEON F 152 LINDEN AVE CLAYTON, MO 63105	GP
EYERICH, NOEL F 621 S NEW BALLAS RD ST LOUIS, MO 63141	IM
EYGANDT, GLENN R 10322 OXFORD HILL DR ST LOUIS, MO 63141	AN
HITE, BRUCE I 456 N NEW BALLAS RD ST LOUIS, MO 63141	PS
HITE, NEWTON B 12615 OLD TESSON ROAD ST LOUIS, MO 63128	ORS
HITE, WM H 950 FRANCIS PL STE 219 CLAYTON, MO 63105	OBG
HITENER, MILES C 9440 MIDLAND ST LOUIS, MO 63114	IM
HITENER, PAUL R 15201 OLIVE BLV AP 274 CHESTERFIELD, MO 63017	GP
HITESIDE, LEO A 4989 BARNES HOSPITAL PLAZA ST LOUIS, MO 63110	ORS
HITTICO, JAMES M 2715 UNION BLVD ST LOUIS, MO 63113	GS
IANT, JAMES R 621 S NEW BALLAS RD ST LOUIS, MO 63141	PUD
ICHIENKUER, PEIRUCH 908 MARYHUST DR CLAREMONT, CA 91711	IM
IEDERSHINE, LEONARD J 522 N NEW BALLAS RD STE ST LOUIS, MO 63141	P
IEGAND, HERBERT C 4989 BARNES PLAZA STE 3 ST LOUIS, MO 63110	IM
IENKE, EUGENE C 2821 N BALLAS RD ST LOUIS, MO 63131	PTH
ILBOIS, RONALD P 2821 N BALLAS RD ST LOUIS, MO 63131	OBG
ILKINSON, DAVID 10007 KENNERLY RD ST LOUIS, MO 63128	NS
ILLIAMS, CAROL F 950 FRANCIS PL. SUITE 303 ST LOUIS, MO 63105	GYN
ILLIAMS, JOSEPH 950 FRANCIS PL. ST.LOUIS, MO 63105	ORS
ILLIAMS, RAY D 114 N TAYLOR AVE ST LOUIS, MO 63108	IM
ILLIAMS, ROY J 3409 N UNION ST LOUIS, MO 63115	IM
ILLIAMSON, WALTER E RT #1 BOX 125W WINTER GARDEN, FL 32787	OM
ILLIS, H R 646 N. KIRKWOOD RD. ST LOUIS, MO 63122	GS
ILLMAN, MARTIN L 2860 W CLAY ST CHARLES, MO 63301	OTO
ILLMAN, VALLEE L 1325 S GRAND AVE ST LOUIS, MO 63104	TS
ILSON, KEITH S 9 CRESTWOOD DR ST LOUIS, MO 63105	IM
WILSON, SUSAN L 400 N 4TH APT 2601 ST LOUIS, MO 63102	AN
WILUCKI, MELVIN R 8916 GRAVOIS AVE ST LOUIS, MO 63123	GP
WIMMER, WARREN J 3220 PARKER RD FLORISSANT, MO 63033	PD
WINDSOR, CHAS E 777 S NEW BALLAS RD ST LOUIS, MO 63141	OPH
WINER, MICHAEL H 522 N NEW BALLAS RD ST LOUIS, MO 63141	ORS
WINTER, JOHN H 3394 MC KEVEY RD BRIDGETON, MO 63044	IM
WINTER, TYRUS D 100 N EUCLID ST LOUIS, MO 63108	OBG
WINTERS, KATHLEEN 4511 FOREST PARK BLVD ST LOUIS, MO 63108	PD
WIRTHLIN, EDWARD H 12660 LAMPLIGHTER SQUAR ST LOUIS, MO 63128	GP
WISSMATH, FRANK S 35 N CENTRAL AVE CLAYTON, MO 63105	PD
WISSNER, SETH E 16 HAMPTON VILLAGE ST LOUIS, MO 63109	OBG
WITHROW, DONALD 10 THORNDELL DR ST LOUIS, MO 63117	PTH
WITT, CLYDE M 2821 N BALLAS RD ST LOUIS, MO 63131	R
WITTGEN, EDWARD M 6651 CHIPPEWA ST ST LOUIS, MO 63109	ORS
WITTLER, HARRY A 325 N KIRKWOOD RD KIRKWOOD, MO 63122	GS
WOCHNER, RAYMOND D 8121 PERSHING ST LOUIS, MO 63105	IM
WOLF, MITCHELL L 216 S KINGSHIGHWAY ST LOUIS, MO 63110	OPH
WOLFE, EDWARD M 777 S NEW BALLAS RD ST LOUIS, MO 63141	D
WOLFF, DOLORES J 3 TUSCANY PARK CLAYTON, MO 63105	AN
WOLFF, GERALD A 4989 BARNES HOSP PLZ ST ST LOUIS, MO 63110	IM
WOLFF, HAROLD D 791 CLUBHOUSE DR. BALLWIN, MO 63011	P
WOLFF, RAY J 500 NW PLAZA ST ANN, MO 63074	P
WOLFGRAM, EDWIN D 4500 W PINE BLVD ST LOUIS, MO 63108	P
WOOD, BENNETT R 3442 GERALDINE ST LOUIS, MO 63115	GP
WOOD, JAMES A 141 N MERAMEC CLAYTON, MO 63105	CD
WOOD, JOHN A 4910 FOREST PK AVE ST LOUIS, MO 63108	IM
WOODRUFF, SHARON L 205 ELM ST WASHINGTON, MO 63090	N
WOOL, GERALD 8025 DALE ST LOUIS, MO 63117	PD
WOOLSEY, JOYCE E 1034 S BRENTWOOD ST LOUIS, MO 63117	N
WOOLSEY, ROBT M 1325 S GRAND BLVD ST LOUIS, MO 63104	N
WORD, PARKER H 3737 N KINGSHIGHWAY BLV ST LOUIS, MO 63115	OBG
WOTAWA, WM J 3804 WILMINGTON AVE ST LOUIS, MO 63116	OBG
WRAY, ROBT C 4960 AUDUBON ST LOUIS, MO 63110	PS
WULFF, GEO J 120 CAMELOT DR TAVERNIER, FL 33070	OBG
WURR, DIETER H ARNOLD MED CTR BOX 99 ARNOLD, MO 63010	GP
WYATT, LOIS C 103 N TAYLOR AVE KIRKWOOD, MO 63122	GP
XYNOS, FRANCIS 1325 S GRAND ST LOUIS, MO 63104	OBG
YALCIN, ENVER 13070 OLD TESSON FERRY RD ST LOUIS, MO 63128	IM
YANNAKAKIS, JOHN E 1245 GRAHAM FLORISSANT, MO 63031	OBG
YANOW, MITCHELL 777 S NEW BALLAS RD ST LOUIS, MO 63141	OBG
YAP, MARDONIO J 493 RUE ST FRANCOIS FLORISSANT, MO 63031	GS
YASIN, FAZLE M 911 S BRENTWOOD ST LOUIS, MO 63139	P
YATES, DARREL W 2821 N BALLAS RD ST LOUIS, MO 63131	R
YAZDI, ATAOLLAH M 16 HAMPTON VILLAGE PLAZ ST LOUIS, MO 63109	OBG
YECIES, LEWIS D 523 ARROWHEAD DR CRESTWOOD, MO 63126	IM
YLAGAN, AMANDO 6630 CLAYTON RD ST LOUIS, MO 63117	GS
YORE, RICHARD W 1034 S BRENTWOOD BLVD S ST LOUIS, MO 63117	TS
YOSELEVSKY, ROBERT 10 TAYLOR WOODS ST LOUIS, MO 63122	IM
YOUNGE, WALTER A 501 MADISON LOVEJOY, IL 62059	IM
YOUNGER, ANITA C 16 HAMPTON VILLAGE PLAZ ST LOUIS, MO 63109	GP
YOUNGER, ERNEST 16 HAMPTON VILLAGE PLAZ ST LOUIS, MO 63109	GP
YOUSSEF, ELHAM 1325 S GRAND BLVD ST LOUIS, MO 63104	AN
YU, HONG Y 3744 INGLEWOOD BLVD LOS ANGELES, CA 90066	AN
ZAHORSKY, THEODORE S 800 S HANLEY RD-APT 3B ST LOUIS, MO 63105	PD
ZEFFREN, J L 2428 WOODSON RD OVERLAND, MO 63114	IM
ZEIGLER, JOS M 3933 S. BROADWAY ST LOUIS, MO 63118	R
ZEKERT, HORST 5203 CHIPPEWA ST LOUIS, MO 63109	IM
ZIEGELMEYER, JOHN S 40 N KINGSHIGHWAY ST LOUIS, MO 63108	GP
ZIEGLER, VINCENT E BARNES HOSPITAL DEPT OF PSYCHOLOGY ST LOUIS, MO 63110	P
ZIMMERMAN, HERBERT B 456 NO NEW BALLAS SUITE 299 ST LOUIS, MO 63141	CD
ZINGALE, FRANK G 6500 CHIPPEWA ST ST LOUIS, MO 63109	U
ZIVNUSKA, FREDERICK R RAD THER-615 S NEW BALL ST LOUIS, MO 63141	TR
ZOGRAFAKIS, GEO H 100 N EUCLID AVE ST LOUIS, MO 63108	PS
ZUCKNER, JACK 16 OAKLEIGH LANE ST LOUIS, MO 63124	IM
ZUKOWSKI, EDWARD T 88 RIVER BEND DR CHESTERFIELD, MO 63017	R
ZWART, CLAUDE H 634 NORTH GRAND BLVD ST LOUIS, MO 63103	OTO
ZWIRN, HANS B 493 ST FRANCOIS FLORISSANT, MO 63031	PD

198—SALINE

BAIK, KENNETH Y HIGHWAY 20 W MARSHALL, MO 65340	GS
BLALOCK, ROBT W 370 S ODELL ST MARSHALL, MO 65340	IM
BUTNER, MICHAEL R 370 S ODELL MARSHALL, MO 65340	US
KNIPSCHILD, BEDFORD F 370 S ODELL ST MARSHALL, MO 65340	GP

LAWRENCE, JOHN R GP
PROFESSIONAL BLDG
ARROW ROCK, MO 65320
MC BURNEY, CHAS A GP
307 N MAIN
SLATER, MO 65349
MC CORKLE, E L GP
MARSHALL PROF BLDG
MARSHALL, MO 65340
PAPRECK, K T GP
370 S ODELL
MARSHALL, MO 65340
RAYNOR, RICHARD C GP
370 S ODELL
MARSHALL, MO 65340
REID, JAMES A GP
370 S ODELL
MARSHALL, MO 65340
ROEHRS, MARVIN E GP
905 S ODELL ST
MARSHALL, MO 65340

202—SEMO (Stoddard-New Madrid-Mississippi-Scott Counties)

AHLVIN, ROBT C PTH
DELTA COMMUNITY HOSPITAL
SIKESTON, MO 63801
ASKEW, JOHN H GP
1012 N MAIN STREET
SIKESTON, MO 63801
BLANTON, JOS C PD
1012 N MAIN ST
SIKESTON, MO 6380I
BOOTH, WM V GS
ONE MILE RD
DEXTER, MO 63841
8RUCE, LEO A OPH
808 E WAKEFIELD
SIKESTON, MO 63801
CAMPBELL, JAMES W GP
ADVANCE, MO 63730
CATRON, DAVID O GP
ONE MILE RD
DEXTER, MO 63841
CHOUINARD, MICHAEL P IM
1012 N MAIN ST
SIKESTON, MO 63801
COLBERT, ROBT S R
108 SALCEDO ROAD
SIKESTON, MO 63801
COMEAU, RICHARD J GP
W GRANT-CATALPA STS
DEXTER, MO 63841
CRITCHLOW, MICHAEL E IM
1012 NORTH MAIN
SIKESTON, MO 63801
CRITCHLOW, WM C GP
BOX 1068
SIKESTON, MO 63801
DAVIS, WIL8UR L GP
102 W COMMERCIAL ST
CHARLESTON, MO 63834
DUNAWAY, HOWARD A OTO
P O BOX 806
SIKESTON, MO 63801
DUPONT, JEAN R CD
1012 N MAIN ST
SIKESTON, MO 6380I
FRAZIER, ROBT L GP
110 DUDLEY DR
SIKESTON, MO 63801
HEEB, MAX A GS
1012 N MAIN ST
SIKESTON, MO 63801
HELFRICH, LORING GS
1012 N MAIN
SIKESTON, MO 63801
HENDERSON, THOS W GP
ONE MILE RD
DEXTER, MO 63841
HILL, RONALD T GS
RT 3
DEXTER, MO 63841
HO, GRINNY H OBG
808 E WAKEFIELD ST
SIKESTON, MO 63801
*KANDALAFT, FUAD H FP
112 S WALNUT
DEXTER, MO 63841
KUO, GONG T O8G
103 SPRING DR
SIKESTON, MO 63801
MAHBOUBI, AZIZ O U
8OX 653
SIKESTON, MO 63801
MARTIN, ANDREW D GP
808 E WAKEFIELD
SIKESTON, MO 6380I
MASTERS, EDWIN J GP
1012 N MAIN ST
SIKESTON, MO 63801
PAGE, JESSE W IM
1012 N MAIN ST
SIKESTON, MO 63801
PFEFFERKORN, DAVID A IM
1012 N MAIN
SIKESTON, MO 63801
PINKSTAFF, THOS H PD
1012 N MAIN ST
SIKESTON, MO 6380I
POPP, CARL G IM
1012 N MAIN ST
SIKESTON, MO 63801
REHM, RALPH D GP
603 N ELM
DEXTER, MO 63841
RODRIGUEZ, GREGORIO L GS
P O BOX 394
CHARLESTON, MO 63834
ROSENSTEIN, DANL L PTH
215 KENNEDY DR
SIKESTON, MO 63801
SARGENT, ALDEN P GP
808 E WAKEFIELD
SIKESTON, MO 63801
SARGENT, JOHN P GS
808 E WAKEFIELD
SIKESTON, MO 63801
SHELL, WILLIAM C GE
1012 N MAIN
SIKESTON, MO 63801
THORNTON, FRED H GS
1012 N MAIN ST
SIKESTON, MO 63801
THROGMORTON, HOWARD B GP
HIGHWAY 61 NORTH
SIKESTON, MO 63801
WADDLE, THEODORE L GP
25 S LOCUST
DEXTER, MO 63841
WALTON, JOHN D GP
1012 N MAIN
SIKESTON, MO 63801
WALTRIP, ROY T GP
307 W MALONE
SIKESTON, MO 63801
WHITAKER, TOPSY H GP
P O BOX 218
EAST PRAIRIE, MO 63845

206—SOUTH CENTRAL (Howell-Oregon-Texas-Wright-Douglas-Ozark Counties)

AHMAD, RASHID IM
TRI-COUNTY HOSPITAL
MANSFIELD, MO 65704
CALLIHAN, CHARLES F GP
WEST PLAINS, MO 65775
CHOUDHURY, M H GP
MANSFIELD HOSP ANNEX
MANSFIELD, MO 65704
COFFEE, AMOS L GP
P O BOX 160
WILLOW SPRINGS, MO 65793
COOPER, CLAUDE W GP
204 CHESTNUT
THAYER, MO 65791
DELANY, CLARENCE L DR
P O BOX 1007
WEST PLAINS, MO 65775
DREYER, WM F GP
102 SW OAK CREST DR
HOUSTON, MO 65483
FOWLER, MARVIN L GP
1004 BROADWAY
WEST PLAINS, MO 65775
GENTRY, MARVIN C GP
RURAL ROUTE 2
AVA, MO 65608
HASEK, JAMES A GP
600 N BUSCH
MOUNTAIN GROVE, MO 65711
HASEK, OLIVER M GP
600 N BUSCH AVE
MOUNTAIN GROVE, MO 65711
KANG, YOUNG M GS
P O BOX 725
214 MAIN ST
WEST PLAINS, MO 65775
LANGEVIN, JACK A GS
BOX 348
WEST PLAINS, MO 65775
MAYUGA, LAUREANO G GS
514 PINE ST
CA8OOL, MO 65689
MORGAN, WINFREY T JR GP
805 KENTUCKY
WEST PLAINS, MO 65775
RASHID, PARVEEN OBG
TRI-COUNTY HOSPITAL
MANSFIELD, MO 65704
RUNEZ, MANUEL W GS
1330 S HWY 63
HOUSTON, MO 65483
SMITH, CLAUDE F GP
816 EAST SECOND ST
WILLOW SPRINGS, MO 65793
SMITH, ROLLIN H GP
620 W MAIN
WEST PLAINS, MO 65775
SPEARS, JOE L GP
CA8OOL, MO 65689
WALKER, AMBROSE T GP
414 S 6TH ST
THAYER, MO 65791
WALL, JOE A GP
107 EAST PINE
HOUSTON, MO 65483
WARREN, WM H GP
1149 E. ROSEBRIER
SPRINGFIELD, MO 65807
WILES, JACK N GP
WILES MED SERV LTD 8OX
WEST PLAINS, MO 65775

210—WEBSTER

BAREIS, ROBT J GP
1331 SPUR DR
MARSHFIELD, MO 65706
MACDONNELL, THOS M GP
1331 SPUR RD
MARSHFIELD, MO 65706

214—WEST CENTRAL (Bates-Cass-Cedar-St. Clair-Vernon Counties)

BARONE, PAUL L P
716 S MAIN
NEVADA, MO 64772
BROWNSBERGER, ROBT H US
APPLETON CITY, MO 64724
DAVIS, C 8 CD
824 S ADAMS
NEVADA, MO 64772
EKLUND, ALFRED W GP
405 CEDAR ST
PLEASANT HILL, MO 64080
ELLETT, WM H GS
BOX 96
APPLETON CITY, MO 64724
FRANCISCO, EDGARDO C P
228 POLARIS
SHEPPARD AF8, TX 7631I
FREIN, DONALD E GP
111 S LEXINGTON
HARRISONVILLE, MO 6470I
GEHM, LOUIS E DR
BATES COUNTY HOSP
615 NURSERY
BUTLER, MO 64730
GREENLUND, NELSON C GP
900 S ADAMS
NEVADA, MO 64772
HANSEN, ARTHUR L GP
225 N MAIN ST
BUTLER, MO 64730
HARMS, JAMES F GS
900 S ADAMS
NEVADA, MO 64772
HAYNIE, WILLIAM W GP
STATE BANK BLDG
BUTLER, MO 64730
HENRY, ROBT D GS
SOUTHLAND SHOPPING CNTR
HARRISONVILLE, MO 64701
JONES, EDWARD S GP
BENDIX CORP. BOX 1159
KANSAS CITY, MO 64141
JONES, ROBERT R PD
900 S ADAMS
NEVADA, MO 64772
KING, ELBERT R OS
RT 6
11490 KINGSWAY
BOISE, ID 83702
LONG, CURTIS W GP
RT 4, BOX 338
BUTLER, MO 64730
LUSK, CHAS A GP
911 COUNTRY CLUB
BUTLER, MO 64730
MAGEE, ROBT L GP
808 S MAIN ST
EL DORADO SPRIN, MO 64744
MAGRUDER, LYELL M GP
NEVADA MEDICAL CENTER
NEVADA, MO 64772
MC CANN, LOUIS P AN
210 N CEDAR ST
NEVADA, MO 64772
MOORE, CANDICE A GP
900 S ADAMS
NEVADA, MO 64772
MOORE, MICHAEL T DR
110 W ALLISON
NEVADA, MO 64772
MORTON, WAYNE L FP
TRI COUNTY CLINIC
OSCEOLA, MO 64776
MOU, BIN P
STATE HOSPITAL
NEVADA, MO 64772
PEARSE, ROY W GP
MOORE BLDG
NEVADA, MO 64772
REED, GLEN H GP
APPLETON CITY, MO 64724
RINCK, EDWARD C P
900 S ASH
NEVADA, MO 64772
SEEVERS, RUTH GP
OSCEOLA, MO 64776

---

* Doctor of Osteopathy

TROBACH, ROBT L GP
STATE BANK BLDG
BUTLER, MO 64730

UWANABHAND, CHALAW IM
200 WEST CHESTNUT
BUTLER, MO 64730

HIES, JEROME H GP
TRI COUNTY CLINIC
OSCEOLA, MO 64776

THOMPSON, FREDERICK L GP
900 S ADAMS
NEVADA, MO 64772

TORONTOW, RAPHAEL J IM
NEVADA MED CLINIC
NEVADA, MO 64772

VINSON, HAROLD A R
4242 S OSWEGO
TULSA, OK 74135

WHEELER, ROBT L
SOUTHLAND SHOPPING CTR
HARRISONVILLE, MO 64701

WRAY, ROLLA B GP
701 S ADAMS
NEVADA, MO 64772

List of Designated Specialty Codes

The following specialties, including General Practice, are recognized by the American Medical Association.

M	Aerospace Medicine
	Allergy
N	Anesthesiology
E	Broncho-Esophagology
D	Cardiovascular Diseases
	Dermatology
IA	Diabetes
M	Emergency Medicine
ND	Endocrinology
P	Family Practice
E	Gastroenterology
P	General Practice
PM	General Preventive Medicine
ER	Geriatrics
YN	Gynecology
EM	Hematology
YP	Hypnosis
G	Immunology
D	Infectious Diseases
M	Internal Medicine
AR	Laryngology
M	Legal Medicine
D	Neoplastic Diseases
EP	Nephrology
	Neurology
HN	Neurology, Child
A	Neuropathology
M	Nuclear Medicine
TR	Nutrition
BS	Obstetrics
BG	Obstetrics and Gynecology
M	Occupational Medicine
N	Oncology
PH	Ophthalmology
T	Otology
TO	Otorhinolaryngology
TH	Pathology
LP	Pathology, Clinical
FOP	Pathology, Forensic
PD	Pediatrics
PDA	Pediatrics, Allergy
PDC	Pediatrics, Cardiology
PA	Pharmacology, Clinical
PM	Physical Medicine and Rehabilitation
P	Psychiatry
CHP	Psychiatry, Child
PYA	Psychoanalysis
PYM	Psychosomatic Medicine
PH	Public Health
PUD	Pulmonary Diseases
R	Radiology
DR	Radiology, Diagnostic
PDR	Radiology, Pediatric
TR	Radiology, Therapeutic
RHU	Rheumatology
RHI	Rhinology
ABS	Surgery, Abdominal
CDS	Surgery, Cardiovascular
CRS	Surgery, Colon and Rectal
GS	Surgery, General
HS	Surgery, Hand
HNS	Surgery, Head and Neck
NS	Surgery, Neurological
ORS	Surgery, Orthopedic
PDS	Surgery, Pediatric
PS	Surgery, Plastic
TS	Surgery, Thoracic
TRS	Surgery, Traumatic
U	Surgery, Urological

In addition to the above specialties, the following designation is also used:

OS Other, i.e., physician designated a specialty other than those appearing above.

Missouri State Medical Association Auxiliary

1979-1980 Officers, Directors and Committee Chairmen

OFFICERS

President
Mrs. Ruby Ruhling (Dolores)
3 Webster Knolls, St. Louis 63119
President-Elect
Mrs. Donald A. Fakoury (Ina May)
4332 N. Central, Kansas City 64116
First Vice-President
Mrs. Vernon Jackson (Arlene)
3 Staff Circle, Fulton 65251
Second Vice-President
Mrs. Larry Ozenberger (Dixie)
302 Birch Ave., Plattsburg 64477
Third Vice-President
Mrs. Jerry Meyer (Jan)
302 Sunset Hill Dr., Concordia 64020
Fourth Vice-President
Mrs. William H. Goodson, Jr., (Violet)
815 W. 59th, Kansas City 64113
Recording Secretary
Mrs. James N. Haddock (Dorothy)
111 Firwood, St. Louis 63119
Treasurer
Mrs. John Erickson (Anne)
Route 3, Sedalia 65301
Auditor
Mrs. William Penninger (Marjorie)
2246 Claiborne, Springfield 65804
Corresponding Secretary
Mrs. E. E. King, III (Harriette)
2915 Bellerive Dr., Normandy 63121
Parliamentarian
Mrs. William R. McPhee (Mary Kay)
1205 W. 76th, Kansas City 64114

DIRECTORS

First District
Mrs. Hermanita Trinidad (Lou)
2101 Ridgecrest, Chillicothe 64601
Second District
Mrs. John H. Walterscheid (Nancy)
27 Settlers Terr., Hannibal 63401
Third District
Mrs. Thomas Thale (Janette)
351 Meadowbrook, Ballwin 63011
Fourth District
Mrs. Louis P. Hetlage (Marilyn)
21 Burgundy Dr., Lake St. Louis 63367
Fifth District
Mrs. Robert M. Thomas (Ginny)
2219 Danforth Court, Columbia 65201
Sixth District
Mrs. Richard King (Mary Lou)
501 S. Second, Clinton 64735
Seventh District
Mrs. David A. Tillema (Alverda)
8015 El Monte, Shawnee Mission, Kan. 66208
Eighth District
Mrs. Howard H. Roberts (Donna)
Route 4, Box 144 #32, Joplin 64801
Ninth District
Mrs. Claude Cooper (Myrtice)
Thayer 65574
Tenth District
Mrs. William L. Traxel (Mary)
47 Tomaro Trail, Poplar Bluff 63901

CHAIRMAN OF STANDING COMMITTEES

AMA-ERF
Mrs. Donald C. Sanders (Jackie)
200 Avila Circle, Kansas City 64114
Co-Chairman
Mrs. Harvey P. Rubin (Barbara)
4606 W. 87th Terr., Shawnee Mission, Kan. 66207
Archives
Mrs. Donald A. Fakhoury (Ina May)
4332 N. Central, Kansas City 64116
Co-Chairman
Mrs. Charles R. Willman (Helen)
2105 Lovers Lane, St. Joseph 64505
Bylaws
Mrs. George P. Wilson (Sue)
918 Westwinds Dr., Columbia 65201
Communications
Mrs. Larry Ozenberger (Dixie)
302 Birch Ave., Plattsburg 64477
Community Health
Mrs. C. R. Talbert (Bettie)
2747 Jewel Dr., Cape Girardeau 63701
Community Service
Mrs. Eugene Henschel (Mari)
55 Broadview, St. Louis 63105
Convention Chairman
Mrs. David A. Tillema (Alverda)
8015 El Monte, Shawnee Mission, Kan. 66208
Co-Chairman
Mrs. William H. Goodson, Jr. (Violet)
815 W. 59th, Kansas City 64113
Co-Chairman
Mrs. George P. Wilson (Sue)
918 Westwinds Dr., Columbia 65201
Courtesy
Mrs. John R. Fischer (Elinor)
18 Cricklewood Pl., St. Louis 63131
Doctors' Day
Mrs. A. L. Folkner (Barbara)
Route 1, Warrensburg 64093
Fall Conference Chairman
Mrs. Robert M. Thomas (Ginny)
2219 Danforth Ct., Columbia 65201
Finance and Budget
Mrs. W. H. Hickerson (Dorothy)
4207 S. Crysler, Independence 64055
Health Education
Mrs. Thomas R. Glatter (Mickey)
12616 Cherokee La., Shawnee Mission, Kan
66202
HSA Monitoring
Mrs. Melvin Kasten (Mary)
1209 Sailer Circle, Cape Girardeau 63701

nternational Health
Mrs. E. Rule Olson (Donna)
2645 Wildwood, Springfield 65804

egislation
Mrs. Jerry Meyer
302 Sunset Hill Dr., Concordia 64020

* * *

Liaisons to Intern-Resident Spouses of Medical Centers

t. Louis University
Mrs. William Schwarze (Connie)
3550 Hawthorne Blvd., St. Louis 63104

niversity of Missouri-Columbia
Mrs. Donald Silver (Helen)
1050 W. Covered Bridge Rd., Rt. 4, Columbia 65201

niversity of Missouri-Kansas City
Mrs. John Hunkeler (Mary)
5326 Missouri Woods Rd., Shawnee Mission, Kan. 66205

ashington University
Mrs. Louis P. Hetlage (Marilyn)
21 Burgundy Dr., Lake St. Louis 63367

* * *

ong Range Planning
Mrs. A. J. Campbell (Janet)
1500 W. 16th, Sedalia 65301

Manual
Mrs. E. E. King III (Harriette)
2915 Bellerive Dr., Normandy 63121

Members-at-Large
Mrs. Richard King (Mary Lou)
501 S. Second, Clinton 64735

Membership
Mrs. Vernon Jackson (Arlene)
3 Staff Circle, Fulton 65251

Missouri Auxiligram
Editor
Mrs. Arshad Husain (Jennifer)
2602 Johnson Dr., Columbia 65201

Circulation Manager
Mrs. William C. Allen (Madge)
508 W. Briarwood La., Columbia 65201

Missouri State Medical Foundation
Mrs. Gary Dyer (Eileen)
802 N. 25th, St. Joseph 64506

Health Projects
Mrs. William H. Goodson, Jr. (Violet)
815 W. 59th, Kansas City 64113

Public Affairs-MMPAC
Mrs. Keith D. Jones (Ruthanne)
711 S. Holden, Warrensburg 64093

Co-Chairman
Mrs. Robert A. Slickman (Ruth)
4937 Wyoming, Kansas City 64112

SPECIAL COMMITTEES

ominations
Mrs. A. J. Campbell (Janet)
1500 W. 16th, Sedalia 65301
Mrs. J. Otto Lottes (Dorothy)
1028 Windwood Dr., St. Louis 63124
Mrs. Pat Barelli (June)
5609 Mission Dr., Shawnee Mission, Kan. 66208
Mrs. John N. Martin (Mary)
9 Lindenwood La., St. Joseph 64505

Mrs. Raymond Bozzo (Ruth)
6 Catawba Pl., Washington 63090

NATIONAL REPRESENTATIVES

orth Central Regional Director
Mrs. William R. McPhee (Mary Kay)
1205 W. 76th, Kansas City 64114

Nominating Committee
Mrs. A. J. Campbell (Janet)
1500 W. 16th, Sedalia 65301

Editorial Board, FACETS
Mrs. Richard A. Sutter (Betty)
7215 Greenway Dr., St. Louis 63130

MSMA ADVISORY COUNCIL

John N. Martin, M.D., Chairman
416 N. 7th, St. Joseph 64501

MSMA AUXILIARY LIAISON — Ms. Jean Duensing, 113 Madison, Jefferson City 65102, (314) 636-5151

CONVENTION DATES

AMAA LEADERSHIP CONFLUENCE
Oct. 7-10, 1979
Drake Hotel, Chicago

MSMAA FALL CONFERENCE
Oct. 17-18, 1979
Hilton Inn, Columbia

MSMAA ANNUAL CONVENTION
April 18-20, 1980
Crown Center Hotel, Kansas City

AMAA ANNUAL CONVENTION
July 20-24, 1980
Drake Hotel, Chicago

WOMAN'S AUXILIARY-SOUTHERN MEDICAL ASSOCIATION
Nov. 4-7, 1979 — MGM Hotel, Las Vegas, Nev.

ORGANIZED COUNTIES AND PRESIDENTS

Boone
Mrs. Curtis H. Burgeois (Martha)
Box 118, Rocheport 65279

Buchanan
Mrs. York E. Silliman (Julie)
2715 Francis St., St. Joseph 64501

Butler-Ripley-Wayne-Carter
Mrs. J. L. Hunt (Iris)
3600 Wilcox Rd., Poplar Bluff 63901

Cape Girardeau
Mrs. James Kinder (Mary Frances)
Rt. 1, Box 135, Cape Girardeau 63701

Callaway
Mrs. James K. Ritterbusch (Fern)
2 Bartley La., Fulton 65251

Clay
Mrs. Benesto Tumanut (Sharon)
3814 N.W. 60th, Kansas City 64151

Cole
Mrs. Larry Stauffer (Jan)
2510 Schellridge Rd., Jefferson City 65201

Cooper
Mrs. Edward T. Humphreys (Annie)
1123 Third St., Boonville 65233

Dunklin
Mrs. R. L. Palenske (Sue)
Hornersville 63855

Franklin-Gasconade-Warren
Mrs. James Shaw (Kris)
305 W. 16th, Hermann 65041

Grand River
Mrs. John Rose (Kris)
1024 Grandview, Chillicothe 64601

Greene
Mrs. Martin H. Boone, Jr. (Posey)
Rt. 2, Box 315, Springfield 65802

Jackson
Mrs. John D. Mitchell (Sandra)
6104 Lockton La., Shawnee Mission, Kan. 6620

Jasper
Mrs. Adolph R. Mueller (Judy)
615 Hampton Pl., Joplin 64801

Jefferson
Mrs. Eufemio Verzola (Virginia)
La Bon Country Estates, Festus 63028

Johnson
Mrs. A. L. Folkner (Barbara)
Route 1, Warrensburg 64093

Lafayette-Ray
Mrs. Manit Vajaranant (Irma)
Highway 13, Lexington 64067

Metropolitan St. Louis
Mrs. Bray O. Hawk (Florence)
3534 Hawthorne, St. Louis 63104

Miller-Morgan-Moniteau
Mrs. Ray Lyle (Jean)
209 S. Maple, Versailles 65084

Pettis
Mrs. Alex Horochowski (Sara)
711 W. Broadway, Sedalia 65301

St. Charles-Lincoln
Mrs. Louis P. Hetlage (Marilyn)
21 Burgundy Dr., Lake St. Louis 63367

Saline
Mrs. B. F. Knipschild (Kathryn)
505 N. Brunswick, Marshall 65340

South Central
Mrs. Joe A. Wall (Carol)
320 Cherry Ave., Houston 65583

AUXILIARIES AND COUNTY MEDICAL SOCIETIES

Listed by Districts

FIRST DISTRICT: Andrew,* BUCHANAN, CLAY, Clinton,* GRAND RIVER (Caldwell, Carroll, Daviess, De-Kalb, Grundy, Harrison, Linn, Livingston, Mercer), Northwest Missouri (Nodaway, Holt, Atchison, Gentry, Worth),* Platte.*

SECOND DISTRICT: Chariton-Macon-Monroe-Randolph,* Clark,** Lewis,** Scotland,** Marion-Ralls-Shelby,* North Central (Adair, Knox, Putnam, Schuyler, Sullivan).*

THIRD DISTRICT: ST. LOUIS METROPOLITAN.

FOURTH DISTRICT: FRANKLIN-GASCONADE-WARREN, ST. CHARLES-LINCOLN.

FIFTH DISTRICT: Audrain,* BOONE, CALLAWAY, Camden,* COLE, COOPER, Howard,* MILLER. MORGAN, MONITEAU, Montgomery,* Osage.**

SIXTH DISTRICT: Benton,** Henry,* JOHNSON. LAFAYETTE-RAY, PETTIS, SALINE, West Central (Bates, Cass, Cedar, St. Clair, Vernon).

SEVENTH DISTRICT: JACKSON.

EIGHTH DISTRICT: Barton,* Dallas-Hickory-Polk-Dade,* GREENE, JASPER, Ozarks** (Barry, Christian. Lawrence, McDonald, Newton, Stone, Taney,)* Webster.

NINTH DISTRICT: Shannon,* Mid-Missouri (Crawford. Dent, Laclede,* Maries, Phelps, Pulaski),* SOUTH CENTRAL (Douglas, Howell, Oregon, Ozark, Texas, Wright).

TENTH DISTRICT: Bollinger,* BUTLER-RIPLEY-WAYNE-CARTER, CAPE GIRARDEAU, DUNKLIN. Jefferson,* MINERAL AREA (Iron, Madison, Reynolds, St. Francois, Washington), Pemiscot,* Perry-Ste. Genevieve,* SEMO (Mississippi, New Madrid, Scott, Stoddard).*

CAPITALIZED COUNTIES — Organized Auxiliary.
* No organized Auxiliary.
** No Medical Society.

STATE PAST-PRESIDENTS — 1924-1979

Irs. George H. Hoxie* (Jackson)** 1924-25
Irs. M. P. Overholzer* (West Central) 1925-26
Irs. Arthur B. McGlothlan* (Buchanan)** .1926-27
Irs. W. M. Bickford* (Saline) 1927-28
Irs. Willard Bartlett, Sr. * (St. Louis City) 1928-29
Irs. M. P. Ravenal* (Boone) 1929-30
Irs. A. W. McAlester* (Jackson) 1930-31
Irs. U. J. Busiek (Greene) 1931-32
1635 E. Walnut, Springfield 65802
Irs. David S. Long* (West Central) 1932-33
Irs. Hudson Talbot (St. Louis City) 1933-34
St. Matthew Manor, 227 Brown's Lane, Louisville, Ky. 40207
Irs. W. H. Goodson* (Clay) 1934-35
Irs. M. Pinson Neal* (Boone) 1935-36
Irs. Walter C. Kirschner* (St. Louis City) ..1936-37
Irs. Charles H. Werner* (Buchanan) 1937-38
Irs. Herbert L. Mantz (Jackson) 1938-39
1209 Romany Rd., Kansas City 64113
Irs. Paul F. Cole (Greene) 1939-40
1819 Main, Quincy, Ill. 62301
Irs. S. P. Howard* (Cole) 1940-41
Irs. J. J. Drace (Cape Girardeau) 1941-42
315 Frederick, Cape Girardeau 63701
Irs. Frank L. Davis* (St. Louis City) 1942-43
Irs. Robert C. Haynes (Saline) 1943-44
754 Eastwood, Marshall 65340
Irs. J. B. McCubbin* (Callaway) 1944-45
Irs. Harry M. Gilkey* (Jackson) 1945-46
Irs. W. E. Koppenbrink, Sr. (Lafayette-Ray) ..1946-47
1303 Main, Higginsville 64037
Irs. W. L. Allee* (Miller-Morgan-Moniteau) ..1947-48
Irs. August A. Werner* (St. Louis City) 1948-49
Irs. John J. O'Connell* (St. Louis County) ..1949-50
Irs. Gretchen Van Del McClean (Jackson) .1950-51
3510 Front St., San Diego, Calif. 92103
Irs. W. Carey Cheek (Greene) 1951-52
1535 E. Meadowmere, Springfield 65804
Irs. Richard A. Sutter (St. Louis County)** .1952-53
7215 Greenway Dr., University City 63130
Irs. C. Alex McBurney (Saline) 1953-54
927 Hurt, Slater 65349
Irs. Wilfred E. Martin (Lafayette-Ray) 1954-55
403 E. 2nd, Odessa 64076

Mrs. Frank B. Leitz (Jackson) 1955-56
308 W. 116th, Kansas City 64114
Mrs. Charles T. Shepherd (St. Louis County) 1956-57
10 Covington Meadows, St. Louis 63131
Mrs. Armand D. Fries* (St. Louis City) 1957-58
Mrs. Henry C. Bauman (Nodaway-Holt-Atchison-Gentry-Worth) 1958-59
929 W. 3rd, Maryville 64468
Mrs. Stanley S. Peterson (Greene) 1959-60
721 E. Stanford, Springfield 65804
Mrs. Jordan Kelling (Lafayette-Ray) 1960-61
P. O. Box 171, Waverly 64096
Mrs. Frederick E. Wade (Jackson) 1961-62
413 W. 62nd, Kansas City 64113
Mrs. J. Martyn Schattyn (St. Louis County) ..1962-63
9 Huntleigh Downs, Frontenac, St. Louis 63131
Mrs. Lawrence S. Crispell (Jasper County) ..1963-64
911 Kensington, Joplin 64801
Mrs. Delevan Calkins* (St. Louis City) 1964-
Mrs. Ralph Woods Bohnsack (Grand River) ..1964-66
635 Skyline Dr., Brookfield 64628
Mrs. Wallace R. Stacy (Jackson) 1966-67
3407 Shady Bend Dr., Independence 64052
Mrs. Evora Williams (Clay) 1967-68
616 Ridgeway Dr., Liberty 64068
Mrs. E. F. Butler (Buchanan) 1968-69
3110 Douglas, St. Joseph 64506
Mrs. James A. Reid (Saline) 1969-70
310 Rosehill, Marshall 65340
Mrs. William M. Walker (Greene) 1970-71
2845 Southern Hills Blvd., Springfield 65804
Mrs. Frank J. Valach (St. Louis County) 1971-72
4 Nassau Circle, Creve Coeur 63141
Mrs. Keith D. Jones (Johnson) 1972-73
711 S. Holden, Warrensburg 64093
Mrs. Charles R. Willman (Buchanan) 1973-74
2105 Lovers Lane, St. Joseph 64505
Mrs. George J. Lytton (Jackson) 1974-75
Hastings Regional Medical Center,
Hastings, Neb. 68901
Mrs. William R. McPhee (Clay) 1975-76
1205 W. 76th, Kansas City 64114
Mrs. George P. Wilson (Boone) 1976-77
918 Westwinds Dr., Columbia 65201
Mrs. W. Jack Stelmach (Jackson) 1977-78
5252 Sunset Dr., Kansas City 64112
Mrs. A. J. Campbell (Pettis) 1978-79
1500 W. 16th, Sedalia 65301

---

* Deceased.
** National President

Roster of MSMA Auxiliary Members by Society

BOONE COUNTY
(Columbia 65201)

Allen, Mrs. Joseph, 5813 St. Charles Rd.
Allen, Mrs. Robert, 2007 S. Country Club Dr.
Allen, Mrs. William, 508 W. Briarwood La.
Allen, Mrs. William Corwin, Rt. 3
Almond, Mrs. Carl, 213 W. Blvd. South
Alyea, Mrs. James, 379 Crown Pt.
Anderson, Mrs. Thomas R., 5 McGregor La.
Arnold, Mrs. Richard C., 814 Yale
Arthaud, Mrs. Bradley, 2719 Malibu
Asel, Mrs. Norman, 112 S. Glenwood
Baker, Mrs. James M., 1206 London Dr.
Baker, Mrs. Sherwood A., 2620 Walther Ct.
Barbee, Mrs. Charles W., 3816 Cedar La.
Barbero, Mrs. Guilio J., 408 S. Glenwood
Beck, Mrs. Marcus R., 601 Rock Creek
Black, Mrs. Samuel, 300 S. Glenwood
Blackwell, Mrs. Charles, 3414 Woodrail Terr.
Bourgeois, Mrs. Curtis, Box 118, Rocheport 65279
Bradshaw, Mrs. William, 3408 Woodrail Terr.
Bucher, Mrs. William C., Rt. 3, Box 451
Bumgarner, Mrs. Roger W., 707 Timberhill Rd.
Burns, Mrs. Thomas W., 310 E. Brandon Rd.
Byer, Mrs. John, 806 Yale
Bynum, Mrs. William, 3009 Skylark Dr.
Chalkley, Mrs. Judson, 614 W. Stewart Rd.
Cheek, Mrs. Charles W., Rt. 4, Box 76A
Cochran, Mrs. Donald, 112 Sappington
Cohen, Mrs. Harry B., 111 Alhambra Dr.
Colwill, Mrs. Jack, Countryshire, Rt. 5
Cooper, Mrs. Maurice, 1000 Wayne Rd.
Cope, Mrs. James, Rt. 1, Rocheport 65279
Crowley, Mrs. William J., 806 Crestland
Denninghoff, Mrs. James C., 1006 Vassar
Eggers, Mrs. G. William, 1005 Cowan Dr.
Esterly, Mrs. James, Rt. 1, Box 253, Ashland 65010
Faheem, Mrs. Ahmed, 3012 Middlebush Dr.
Ferneau, Mrs. James, 1040 Queen Ann Dr.
Foote, Mrs. Jerry E., Rt. 4
Frazier, Mrs. Robert E., 367 Crown Point
Fuchs, Mrs. George J., 201 W. Brandon Rd.
Gaines, Mrs. Robert W., 3101 Woodkirk
Garrett, Mrs. Glen, 102 E. Brandon Rd.
Garrotto, Mrs. Lewis, 814 Hulen Dr.
Gaston, Mrs. Lamont, 920 Edgewood
Griffin, Mrs. William T., 822 Greenwood Ct.
Hardwicke, Mrs. Henry, Walnut Hill Farm, Ashland 65010
Harris, Mrs. Hugh S., Jr., 801 Cowan Dr.
Harris, Mrs. Robert J., 2505 E. Broadway
Hart, Mrs. William, 109 Sappington Dr.
Henstorf, Mrs. Harold, 1815 Ridgemont
Hickcox, Mrs. John P., 2616 Rollins Rd.
Holekamd, Mrs. Timothy, 2412 Ridgefield Rd.
Huesen, Mrs. James, 604 W. Broadway
Husain, Mrs. Syed A., 2602 Johnson Dr.
Ide, Mrs. Carl, 1008 Bourn Ave.
Irvin, Mrs. William S., Rt. 4, Box 68
Jackson, Mrs. Robert L., 1103 W. Stewart Rd.
Johnson, Mrs. Richard E., 129 Lindell Dr.
Johnston, Mrs. William D., 600 Thilly
Joseph, Mrs. Donald, 1201 Parkridge
Kardinal, Mrs. C. G., 1264 Sunset Dr.
Keown, Mrs. Kenneth, 402 Westmount
Klachko, Mrs. David, 407 Westwood
La Chance, Mrs. Leopold, P.O. Box 121F, Centralia 65240
Ladenson, Mrs. Roland, 704 Westmount
Landhuis, Mrs. Leo R., 2911 Scott Rd.
Leech, Mrs. Charles A., 815 W. Stewart Rd.
Lepper, Mrs. Sidlee W., Rt. 3, Box 42
Litton, Mrs. Lynn D., 3615 I-70 Dr. S.W.
Litwiller, Mrs. Raymond W., 1312 W. Broadway
Llorens, Mrs. Alfred S., 605 Rockcreek Dr.
Logue, Mrs. John, 912 Crestland
Lohmar, Mrs. Roland E., Rt. 5, Box 335
Marienfeld, Mrs. Carl, Rt. 1, Ashland 65010
McElroy, Mrs. Glenn, 3416 Woodrail Terr.
Meyer, Mrs. John C., 2612 Mallard Ct.
Miller, Mrs. LeRoy, 32 Bingham Rd.
Millikan, Mrs. Larry E., 203 Orchard Ct.
Mitchell, Mrs. Frank, 2200 Danforth Ct.
Mitchell, Mrs. Lynn D., 3612 Arbor Dr.
Monroe, Mrs. Dean, 2214 Ridgefield Rd.
Mosby, Mrs. Larry D., 107 E. Brandon
Nolph, Dr. Georgia B., 801 Westport Dr.
Orth, Mrs. D. Gerald, 2404 Beachview Dr.
Overholser, Mrs. Milton, 110 E. Brandon Rd.
Parker, Mrs. Brent M., 2607 Luan Ct.
Perez-Mesa, Mrs. Carlos, 609 Stewart Rd.
Pfefer, Mrs. Leland U., 2409 Buff Blvd.
Pickard, Mrs. Clarence, 1213 Parkridge Dr.
Pingleton, Mrs. William, 113 Tracy Dr.
Politte, Mrs. Lenard, Rt. 1, Cedar Grove
Pulliam, Mrs. Morris, 1324 Overhill Rd.
Rall, Mrs. Kenneth, 1121 Danforth Dr.
Ridenhour, Mrs. C. E. Gene, Rt. 1, Cedar Grove
Rodgers, Mrs. Elrie, 202 S. Glenwood
Rosenholtz, Mrs. Mitchell, 103 Longfellow
Ross, Mrs. Gilbert, Rt. 1
Russell, Mrs. Garth, 1210 W. Broadway
Sanders, Mrs. Harold L., 504 Stalcup
Silver, Mrs. Donald, Rt. 4, 1050 W. Covered Bridge Rd.
Smith, Mrs. J. Ned, Jr., 701 W. Boulevard S.
Soha, Mrs. Joseph, Jr., 114 Arbor Dr.
Spurgeon, Mrs. Milo J., 404 Edgewood Ave.
Stephenson, Mrs. Hugh E., 5 Danforth Circle
Stewart, Mrs. W. B., 1401 Ridgemont
Stoy, Mrs. Robert, 811 Canterbury Dr.
Stradford, Mrs. H. Todd, 1444 S. El Chaparral Ave.
Struessel, Mrs. Kenneth, 3717 Woodridge Ct.
Thomas, Mrs. Robert M., 2219 Danforth Ct.
Tully, Mrs. Richard, 1106 Lakeshore Dr.
Van Stone, Mrs. John, 2604 Ridgefield
Visot, Mrs. Luis R., Rt. 1, Box 275 B, Rocheport 65279
Vogel, Mrs. Curt M., 3707 Woodridge Ct.
Watson, Mrs. Trevor F., 2319 Bluff Blvd.
Whittier, Mrs. Frederick C., Rt. 5, Countyshire Estates
Wilson, Mrs. George P., 918 Westwinds Dr.
Wilson, Mrs. John, 1117 Woodhill Rd.
Windmiller, Mrs. M. Eugene, 106 Parkview Dr.
Winnacker, Mrs. John L., 609 Thilly

BUCHANAN COUNTY
(St. Joseph)

Acuff, Mrs. Robert P., 3015 Miller Rd. 64506
Ahad, Mrs. Abdul, Box 263, 3400 Frederick Ave. 64502
Andres, Mrs. Edward, 2323 NW Ext. Blvd. 64506
Baker, Mrs. W. C., 708 S. First, Savannah 64485
Bartulica, Mrs. Nicholas, 3315 Frederick Blvd. 64506
Beck, Mrs. Paul, 3216 Coronado 64505
Beheler, Mrs. Edward M., 8 Stonecrest Terr. 64506
Berney, Mrs. Francis J., 1225 N. 10th 64501
Brennan, Mrs. Richard, 602 N. 25th 64501
Brown, Mrs. Merlin, 22 Evergreen Terr. 64505
Bryant, Mrs. Sydney L., 1805 N. 33rd 64506
Butler, Mrs. E. F., 3110 Douglas 64506
Callman, Mrs. George, P.O. Box 655, Farleigh Station 64506
Carle, Mrs. Rachel, 2707 N. 26th 64506
Carpenter, Mrs. G. Tyson, 2612 Indian Trail 64506
Chiarottino, Mrs. Joseph F., 13800 N. E. 12th, Apt. 203, Bellevue, WA 98008
Christ, Mrs. Martin H., 414 Benton Dr. 64504
Corder, Mrs. Robert, Jr., 4302 W. Haverhill Dr.
Craig, Mrs. Owen W. D., 3408 Colony Sq. E. 64506
Du Mont, Mrs. Clement, 1905 Francis 64501
Dyer, Mrs. Gary A., 802 N. 25th 64506
Escobar, Mrs. Nelson, 1610 No. 29th, St. Joseph 64506
Fisher, Mrs. Joseph L., 1 Wishbone 64505
Forgrave, Mrs. John R., 2611 Cornell 64506
Forman, Mrs. George W., 2412 Ashland 64506
Fox, Mrs. Gerald, 2106 Lovers La. 64505
Gondring, Mrs. William H., 17 Eastwood Dr. 64506
Grimes, Mrs. Manning E., 815 N. Noyes Blvd. 64506
Gunter, Mrs. Joseph, 1319 N. 43rd 64506
Hayes, Mrs. Paul W., 610 N. Noyes Blvd. 64506
Hermah, Mrs. Allen I., 1909 N. 32nd 64506
Hermann, Mrs. Charles G., 3608 E. Colony Sq. 64506
Howden, Mrs. T. L., 2723 Francis 64501
Ide, Mrs. Lucien W., 1416 N. 25th 64506
Inocencio, Mrs. Eddie, 4322 S. Stonecrest Cir. 64506
Jimenez, Mrs. Jose, Box 263, 2222 Edgewater 64506
Kieber, Mrs. R. W., 1915 N. 33rd 64506
Knepper, Mrs. Paul, 2002 Ashland 64506
Lehman, Mrs. Phillip, 2702 Lovers Lane 64506
Marston, Mrs. F. James, 4230 Karnes Rd. 64506
Martin, Mrs. John, 9 Lindenwood La. 64505
McDaniel, Mrs. John R., 1808 N. 29th 64506
McDonald, Mrs. Wallace, 29 Ridgeland Rd. 64505
McDonald, Mrs. Wilbur P., 6 Country Club Rd. 64505
McMillen, Mrs. James, 3610 W. Colony Sq. 64506
Meriwether, Mrs. Don R., 1826 Lovers La. Terr. 64505
Moen, Mrs. Berwyn H., 2214 Carper Dr. 64506
Mothershead, Mrs. John L., 2630 Farleigh Terr. 64506
Mullican, Mrs. Charles N., 2103 Lovers La. 64505
Murphy, Mrs. James, 4334 Stonecrest Dr. 64506
Ness, Mrs. Carl K., 8 Lindenwood La. 64505
O'Connor, Mrs. William B., 2316 N. 22nd 64505
Ozenberger, Mrs. Larry, 302 Birch Ave., Plattsburg 6447
Partamian, Mrs. Krikor, 3405 W. Colony Sq. 64506
Paulson, Mrs. Gordon, 1820 Ashland Ave.
Peterson, Mrs. Harold E., 2903 Frederick 64506
Pfeffer, Mrs. Robert, 1915 N. 29th 64506
Prokop, Mrs. Joseph R., 29 Stonecrest 64506
Raphel, Mrs. Jose, 1111 49th-Terr. 64506
Redmond, Mrs. William, 3102 Jule 64501
Riddell, Mrs. Richard V., 2610 Indian Trail Dr. 64506
Rogers, Mrs. John T., 2502 Ashland 64506
Rosenthal, Mrs. Irwin, 5007 Stonecrest Terr. 64506
Rost, Mrs. William B., 2221 Northwest Ext. 64506
Saferstein, Mrs. T. H., 2903 Sherman Ave. 64506
Senne, Mrs. Herbert C., 1308 S. Noyes 64507
Senor, Mrs. Earl, 2920 Renick 64507
Shah, Mrs. Narendra N., 4313 Stonecrest Dr. 64506
Shevlin, Mrs. Charles F., 840 N. 25th 64506
Silliman, Mrs. York E., 2715 Francis 64501
Sklenar, Mrs. Donald E., 3910 N. 71 Highway 64506
Smith, Mrs. Clifton, 2821 Ashland 64506
Spurgat, Mrs. Robert, 14 Stonecrest Terr. 64506
Stallard, Mrs. Donald J., 1417 N. 25th 64506
Stevens, Mrs. Edward, 2923 Joslin La. 64506
Stuber, Mrs. Robert R., 4208 Miller Rd. 64505
Tobin, Mrs. Robt. F., 9 Fieldcrest 64506
Wadlow, Mrs. Ernest E., 1401 N. 42nd 64506
Waggoner, Mrs. Sharon E., 5820 S. 3rd 64504
Weed, Mrs. Randall W., 1821 Clay 64501
Whitsell, Mrs. Ora Earl, 2306 Sacramento 64507
Willman, Mrs. Charles, 2105 Lovers La. 64505
Wolanski, Mrs. Eugene G., 4309 Stonecrest Dr. 64506
Young, Mrs. Thomas J., 2300 N.E. Parkway 64506

BUTLER-RIPLEY-WAYNE-CARTER COUNTIES
(Poplar Bluff 63901)

Andrus, Mrs. Don, Rt. 7, Box 290
Caldwell, Mrs. Fred, 1620 Sylvan
Christy, Mrs. John, Rt. 2, Box 295-C
Conger, Mrs. Wm., 645 N. 9th
Espinosa, Mrs. Tom, 2005 Meadows Rd.
Hansbrough, Mrs. Eugene T., Lurlyn Rd.
Hecker, Mrs. Joseph E., 2019 Woodhaven
Hunt, Mrs. John, 3600 Wilcox
Kwoun, Mrs. Soung D., 2012 Meadows Rd.
Laatsch, Mrs. Robert H., 13333 Meadow La.
Ladyman, Mrs. George H., 1403 Lurlyn
Leary, Mrs. W. V., 1415 Big Bend
McLane, Mrs. Jerry F., 2107 Jackson Rd.
Parker, Mrs. Arthur C., Jr., 708 Selma
Ramirez, Mrs. Ricardo, 2022 King Rd.
Ruff, Mrs. T. Eugene, 1411 Rosedale
Suvan, Mrs. Rangsan, 2609 Holly Hill Dr.
Till, Mrs. Bennie, 2806 Shady Lane
Traxel, Mrs. William L., 41 Tomaro Oaks
Tuma, Mrs. A. T., 1601 Big Bend Rd.
White, Mrs. Barry B., 2521 Park Pl.
Wood, Mrs. Tom, 2008 Schweitzer Dr.

CALLAWAY COUNTY
(Fulton 65251)

Durst, Mrs. Henry, 504 A. Jefferson
Groce, Mrs. George, 1 Bartley La.
Jackson, Mrs. Vernon, 3 Staff Circle
Osbourn, Mrs. Richard A., 803 Bradley La.
Parulekar, Mrs. Dilip G., 805 Groce Pl.
Ponce, Mrs. C. A., One Staff Circle
Ritterbusch, Mrs. James K., 2 Bartley La.
Wood, Mrs. George F., 1700 Plaza Dr.

CAPE GIRARDEAU COUNTY
(Cape Girardeau 63701)

Adams, Mrs. Riley, Rt. 2, Twin Lakes
Asher, Mrs. Kenneth, 666 Strawberry La., Jackson 63755
Bahn, Mrs. Charles, 2418 Brookwood
Blankenship, Mrs. Dale, 1420 Sylvan La.
Bowman, Mrs. Kirk, 1965 Robinhood Circle
Burford, Mrs. Edwin K., 2424 Terry Hill
Campbell, Mrs. Edward, 1100 N. Henderson
Chapman, Mrs. Jean Allen, 1703 W. Cape Rock Dr.
Clark, Mrs. David, Rt. 2, Twin Lakes
Clarke, Mrs. Paul, 3120 Kage Hills Dr.
Cozean, Mrs. Charles, 1548 Oak Lei
Crowe, Mrs. John, 1000 N. Henderson

undiff, Mrs. Clay, 2014 Sara Dr.
inkins, Mrs. James, 1235 Sailer Circle
owney, Mrs. Patrick, 3218 Kage Hills Dr.
zur, Mrs. James, 11 S. Pindwood
dwards, Mrs. Don, 2530 Jonquil La.
ller, Mrs. Gordon W., Rt. 2, Box 534C, Twin Lakes
lrod, Mrs. Dennis B., 2500 Fairlane
lenn, Mrs. Theodore, 1922 Sherwood
erbert, Mrs. Charles, 648 Sylvan La.
olcomb, Mrs. John K., Rt. 1
orn, Mrs. Paul, 1909 Huntington
unt, Mrs. Robert S., 5 Bienville
hnson, Mrs. Earl Wayne, 1044 N. Henderson
hnson, Mrs. E. D. Jack, 11 Dunmaine
nes, Mrs. David, Box 127
ung, Mrs. Marshall, Box 427, Illmo (Mo.) 63754
amath, Mrs. K. Prabhakar, 1511 Briarcliff Dr.
asten, Mrs. Melvin C., 1209 Sailor Circle
inder, Mrs. James, Rt. 1, Box 135
inder, Mrs. Jerry L., 2426 Brookwood
oldys, Mrs. Kenneth, 2460 Fairview
ratz, Mrs. Paul, 1720 Cecilia
ovinggood, Mrs. Thomas, 2505 Allendale Dr.
angunta, Mrs. Vijaya, Rt. 2, Twin Lakes
artin, Mrs. Richard, 605 Red Bud Circle
cDonald, Mrs. Eugene, 930 Jackson Tr.
cGinty, Mrs. Charles, 2819 Gordonville Rd.
ehler, Mrs. William, 1001 N. Henderson
tto, Mrs. Thomas, 511 Alta Vista
alen, Mrs. James, 716 Terrace
app, Mrs. Harold, 1011 N. Henderson
awlins, Mrs. Fred, 1607 Bertling
idings, Mrs. Harold, 6 Sylvan La.
iddings, Mrs. Ray, Rt. 2, Box 539m, Twin Lakes
nger, Mrs. C. Nelson, 2022 Allen Dr.
tter, Mrs. Carl, 616 Peironnet
tter, Mrs. C. J., 24 Schonnoff Lane
tter, Mrs. Raymond A., Jr., 2408 Terry Hill
tter, Mrs. Raymond A., Sr., 2542 Allendale Dr.
oberts, Mrs. Perry, Rt. 2
obinson, Mrs. Ronald, 1117 Patricia
chultz, Mrs. Georg, 121 E. Rodney, Apt. G-3
eabaugh, Mrs. Loy, 811 E. Rodney
hriven, Mrs. Ronald G., 1538 Parksite
hoss, Mrs. Milton, 1222 W. Cape Rock Dr.
ides, Mrs. Stanley, 2014 Beth Dr.
parkman, Mrs. Thomas, 1629 Oxford Dr.
albert, Mrs. Clifford R., 2747 Jewel Dr.
erry, Mrs. James W., 2122 Woodhaven
rueblood, Mrs. Michael C., 2327 Belleridge Pike
ygett, Mrs. Joe, 2112 Woodhaven
hitten, Mrs. Stephen, 3132 Lakewood Dr.
ilson, Mrs. Charles, Oak Lei Dr.
offuto, Mrs. Anthony, 1524 Amblewood

LAY COUNTY
ansas City)

llen, Mrs. Louis, 501 S. Woodland Dr. 64118
rmstrong, Mrs. Jay H., 4812 Black Swan Dr., Shawnee Mission KS 66216
rst, Mrs. Herbert E., 1201 N.E. 81st 64118
alhuizen, Mrs. John, 600 N.W. 42nd Terr. 64116
ates, Mrs. G. Comer, 102 N.E. 43rd 64116
enson, Mrs. Larry E., 3600 Appletree La. 64119
oone, Mrs. Daniel C., 5800 N. Grand 64116
owles, Mrs. Richard, 414 N. Ridge, Liberty 64068
stillo, Mrs. Michael E., 4504 N.W. 79th Terr. 64151
astain, Mrs. Maurice W., 3 N.E. 47th 64116
atkupt, Mrs. Suthon, 2002 W. Norma Ct. Excelsior Springs 64024
iles, Mrs. David R., 405 Maple, Smithville 64089
oper, Mrs. Barry R., 5431 Mission Dr., Shawnee Mission, KS 66208
oper, Mrs. Gary D., 9948 N. Charlotte 64155
emer, Mrs. William J., 7241 N. Indiana 64119
l Muro, Mrs. F., 5902 Poplar Dr. 64118
ernoncourt, Mrs. John, 603 Quincy, Smithville 64089
lan, Mrs. C. Terrance, Rt. 2, Smithville 64089
unham, Mrs. Robert H., Rt. 29 64165
-Ragos, Mrs. Ramon R., 10106 N.W. 74th 64152
dwards, Mrs. Theodore F., 512 N.W. 43rd Terr. 64116
khoury, Mrs. Donald A., 4332 N. Central 64116
scher, Mrs. Jose, 8515 W. 71st St. 66204
anders, Mrs. Virgil E., 9305 N.W. 79th 64152
uer, Mrs. Robert J., 525 N.W. 43rd Terr. 64116
khool, Mrs. Premlall, 516 Lancelot, Liberty 64068
agan, Mrs. John C., 3205 Shady Lane Dr. 64119
yes, Mrs. Larry, 440 N. Woodland 64118
dges, Mrs. Richard C., 1017 Southwind Dr., Excelsior Springs 64024
enry, Mrs. Joseph E., 1005 Brentwood Cir. 64112
dge, Mrs. Robert H., 2204 N.E. 39th 64116
e, Mrs. Frank H., 6700 W. 66th Terr., Shawnee Mission, KS 66202
rkland, Mrs. Jerry, Rt. 2, Kearney 64060
enzi, Mrs. Donald E., 924 S. Woodland Dr. 64118
nning, Mrs. R. James, 3801 N. Central 64116
timer, Mrs. Walter N.A., 4915 N. Kansas 64119
slie, Mrs. Stephen A., 9704 N.W. 75th Terr. 64152
Lila, Mrs. Aram, Rt. 1, Box 132-C, Excelsior Springs 64024
Littlejohn, Mrs. Robert 5215 W. 63rd Terr., Shawnee Mission, KS 66208
McCormick, Mrs. James E., 309 Northcrest Dr. 64116
McElroy, Mrs. Michael B., 3801 W. 57th Terr., Fairway, KS 66205
McPhee, Mrs. William R., 1205 W. 76th 64114
Mullins, Mrs. Bernard, 510 N.E. 106th 64155
Parker, Mrs. Robert H., 5204 N.W. 82nd Terr. 64151
Patterson, Mrs. Carroll D., 626 N.W. 42nd Terr. 64116
Pileggi, Mrs. Felix A., 424 N.W. Briarcliff Rd. 64116
Prather, Mrs. William, 221 Hickory Cir., Gladstone 64118
Revare, Mrs. Paul, 3245 Chippewa Dr. 64116
Robinson, Mrs. Van M., 415 N.W. Briarcliff Ct. 64116
Schertz, Mrs. Truman, 428 N.W. Briarcliff Rd. 64116
Schutz, Mrs. John P., Rt. 1, Box 186-A, Excelsior Springs 64024
Slaughter, Mrs. Carl, 1001 N. Woodland 64118
Smith, Mrs. Charles H., 6203 Circle Dr. 64118
Somoza, Mrs. Jose, 15 N.E. Hill 64116
Soper, Mrs. William, 1006 Forest La., Liberty 64068
Spelman, Mrs. Arch E., 500 N. Bridge, Smithville 64089
Sportsman, Mrs. Weldon L., Rt. 2, Smithville 64089
Stratman, Mrs. Clarence A., 405 N.W. 53rd 64118
Taney, Mrs. Gary, 10302 N.W. 67th 64152
Thomas, Mrs. Anthony, 940 N. Woodland Dr. 64118
Triplett, Mrs. Daniel A., 936 Scott Dr., Liberty 64068
Tumanut, Benesto, 7311 N.W. Nevada Ave. 64152
Underwood, Mrs. J., III, 4222 N. Grand 64116
Vilmer, Mrs. Charles E., 6209 W. 65th, Shawnee Mission, KS 66202
Vilmer, Mrs. Stephen E., 6312 W. 67th Terr., Shawnee Mission, KS 66204
Wald, Mrs. Donald, 1608 N.E. 69th 64118
Waterman, Mrs. Franklin M., 420 Glendale Rd., Liberty 64068
Werner, Mrs. Dan F., 4609 N. Main 64116
Werner, Mrs. Franklin C., Rt. 1, Box 479-B, Liberty 64068
Williams, Mrs. R. D., 6533 Rainbow, Shawnee Mission, KS 66208
Withrow, Mrs. John B., 3925 N. Main 64116
Workman, Mrs. Charles E., 6609 Milhaven Dr., Shawnee Mission, KS 66202
Wright, Mrs. Earl, 8203 N. Oregon Dr. 64151

COLE COUNTY
(Jefferson City 65101)

Allen, Mrs. James E., 846 Crestmere
Beldon, Mrs. E. A., 2124 Lowell
Bowe, Mrs. Ted, 2503 Schellridge Dr.
Boyer, Mrs. Peter, 314 Old Gibler
Bregant, Mrs. Robert, 3435 Country Club Dr.
Busby, Mrs. William E., 320 Riverview Dr.
Cox, Mrs. William A., 812 Swifts Highway
Davisson, Mrs. Walter, Schott Rd.
Deckert, Mrs. James, Rt. 1, Centertown 65023
Dorris, Mrs. Richard P., 1611 Ridgewood
Earp, Mrs. Ralph, Lake Mykee, Holts Summit 65043
Exon, Mrs. C. Stuart, 916 Boonville
Falzone, Mrs. John, 321 Sterling Price Rd.
Garner, Mrs. Lynn M., 403 Meier Dr.
Garner, Mrs. Royal, 123-B Brookdale
Giffen, Mrs. Lawrence E., 1915 Hayselton Dr.
Gordon, Mrs. James, 600 Boonville Rd.
Guhleman, Mrs. Henry V., Jr., 2018 Greenberry Rd.
Gurnee, Mrs. Landon H., 2941 Country Club Dr.
Handler, Mrs. Fred P., 614 Boonville Rd.
Hauser, Mrs. Robert J., 1416 Satinwood
Hughes, Mrs. Derrick, 4104 Rollins Rd., Columbia 65201
Kanagawa, Mrs. Harold Hajime, 816 Houchin
Kanagawa, Mrs. Harold K., 314 Crest Dr.
Kelly, Mrs. Marshall W., 1916 Greenberry Rd.
Klebba, Mrs. Larry B., 3300 Country Club Dr.
Krautman, Mrs. John, 1000 Fairmont
Landsbaum, Mrs. Charles, 319 Fox Creek Rd.
Leslie, Mrs. James T., Jr., 1824 Brookside Blvd.
Loyd, Mrs. Earl L., Rivera Heights, Holts Summit 65043
Marty, Mrs. David, 1210 Moreau Dr.
Matthews, Mrs. John I., 1314 Moreau Dr.
McKnelly, Mrs. William V., 1106 Lee
Meier, Mrs. Francis X., 1913 Hayselton Dr.
Meinershagen, Mrs. Charles W., 111 Forest Hill
Ragland, Mrs. John, Box 517, Lynn 65051
Rea, Mrs. Lee, 2715 Lola Dr.
Russell, Mrs. Joseph P., 1717 Greenberry Rd.
Ryan, Mrs. Thomas J., 1804 Brookside
Schmidt, Mrs. Jerome H., 806 Boonville
Schokker, Mrs. Johannes, P.O. 1608
Shull, Mrs. G. Donald, 1925 Hayselton Dr.
Siu, Mrs. Kenneth C., 1009 Fairmount Blvd.
Stauffer, Mrs. Harry Beach, 830 Boonville Rd.
Stauffer, Mrs. Larry K., 2510 Schellridge
Stephens, Mrs. Sara, 1807 Sherrick Dr., Apt. A
Stricker, Mrs. Harold C., Rt. 5, Zion Rd.
Su, Mrs. Philo S., Valley Park West
Sugarbaker, Mrs. Everett D., 2113 W. Main
Summers, Mrs. Joseph S., Jr., 2312 W. Main
Tanner, Mrs. Robert H., 1910 Greenberry Rd.
Taylor, Mrs. Leon A., 1104 W. Main
Van Vranken, Mrs. Eugene E., 2037 Tower Dr.
Wallace, Mrs. John K., 220 Ridgeway
Wankum, Mrs. Robert, 505 Schellridge Rd.
Watts, Mrs. Byron Edward, 2937 Valley View Terr.
Weiss, Mrs. James, 401 Acorn Dr.
Werth, Mrs. Joseph A., 325 Old Gibler Rd.
Westhoff, Mrs. D. Douglas, 2612 Schellridge Rd.

COOPER COUNTY
(Boonville 65233)

Abele, Mrs. William A., Krohn Dr.
Avery, Mrs. Willard B., 10 Oak Valley Rd.
Hata, Mrs. Daikichi, 7 Morningside Dr.
Humphreys, Mrs. Edward T., 1123 Third St.
Stuart, Mrs. Byron M., 910 Shamrock Terr.
Winn, Mrs. George W., 607 Poplar

DUNKLIN COUNTY
(Kennett 63857)

Cash, Mrs. Charles R., 300 Highway 6
Cheng, Mrs. Tuan-Chow, 1017 Kenwood Dr.
English, Mrs. W. D., Cardwell 63829
Green, Mrs. Jim, 117 Westgate
Legan, Mrs. John K., 617 Butler Dr.
Manubay, De Teresita I., M.D., 204 W. Linden Cir.
Miltenberger, Mrs. Paul C., 705 W. Washington
Morehead, Mrs. William E., 505 N. Beckwith, Malden 63863
Palenski, Mrs. R. L., Hornersville 63855
Pu, Mrs. Pin H., 1105 W. Eighth
Rigdon, Mrs. John, 201 Westgate Ave.
Sinasa, Mrs. Surat, 1624 N. Lincoln Cir.
Sisler, Mrs. Maynard, 217 College
Soonattrakal, Mrs. Withiska, 1616 W. Washington
Tarver, Mrs. Quinton, 1004 W. Washington
Wilson, Mrs. L. C., 915 S. Jackson
Zimmerman, Mrs. Joe A., 1105 White Oak Pl.

FRANKLIN-GASCONADE-WARREN COUNTIES

Allen, Mrs. Jerry H., 807 E. First, Washington 63090
Baker, Mrs. Donald, 900 Clearview Dr., Union 63084
Bonney, Mrs. Samuel C., 2 Southpoint Pl., Washington 63090
Bozzo, Mrs. Raymond J., 6 Catawba Pl., Washington 63090
Crane, Mrs. John B., Rt. 3, Box 510, Washington 63090
Eisenmann, Mrs. Benjamin B., New Haven 63068
Farrell, Mrs. S. L., Rt. 2, Washington 63090
Hoelscher, Mrs. H. F., Hickory Haven, Warrenton 63383
Houttuin, Mrs. Erik, Rt. 1, Box 704N, New Eureka 63025
Moellenhoff, Mrs. Robert W., 2315 E. 5th, Washington 63090
Muench, Mrs. Ludwig O., 2004 E. 3rd, Washington 63090
Richardson, Mrs. G. A., 1 East Lane, Union 63084
Schmidt, Mrs. Charles, Box 143, Gerald 63067
Shaw, Mrs. James T., 305 W. 16th, Hermann 65041
Sincox, Mrs. Charles, Rt. 2, Box 910, Washington 63090
Stine, Mrs. Wayne, Rt. 1, Box 189 R, New Washington 63090

GRAND RIVER COUNTIES
(Caldwell, Carroll, Livingston, Grundy Davies, Harrison, Linn, Mercer & DeKalb Counties)

Bohnsack, Mrs. Ralph, 635 Skyline Dr., Brookfield 64628
Broyles, Mrs. Watkins, Bethany 64424
Cofer, Mrs. Thomas N., 305 Elmdale, Chillicothe 64601
Conrad, Mrs. Joseph, 1202 Jackson, Chillicothe 64601
Cross, Mrs. Albert, 1903 Moberly Rd., Trenton 64683
Daley, Mrs. Frank, 508 E. Samuel, Hamilton 64644
Dixon, Mrs. John, 1005 Brookfield, Brookfield 64628
Fair, Mrs. William, 1705 Calhoun, Chillicothe 64601
Galvez, Mrs. Sisenando P., Santa Fe, Marceline 64658
Gearhart, Mrs. Merriam, 2100 Beekman, Bethany 64424
Howell, Mrs. Billy, Rt. 1, St. Catherine 64677
Mandler, Mrs. George, 6161 Clay, Chillicothe 64601
Park, Mrs. Young, 805 Fairlane Dr., Chillicothe 64601
Platz, Mrs. John, 804 N. Main, Carrollton 64633
Rose, Mrs. John F., 1024 Grandview, Chillicothe 64601
Trinidad, Mrs. Hermanito, 1324 Dorney Dr., Chillicothe 64601
Yoon, Mrs. Jin S., 1424 Vine, Chillicothe 64601

GREENE COUNTY
(Springfield)

Allen, Mrs. Jerry H., 1324 S. Fairway Terr. 65804
Alcancia, Mrs. Elpidio, 3046 S. Marlan 65804
Ancheta, Mrs. Apolinario, 1417 E. Hanover, 65804
Anthony, Mrs. Dallas D., 1322 S. Pickwick, 65804
Ash, Mrs. Charles J., 743 Riverside 65807
Ashley, Mrs. Thomas E., 2740 Pythian 65802
Atkinson, Mrs. Thomas E., Anchor Hill Ranch, Rt. 1, Rogersville 65742

Auner, Mrs. Cecil R., 649 McCann 65804
Back, Mrs. Donald K., 2852 S. Glendale 65804
Bailey, Mrs. Alan, 2242 Barataria 65804
Baldwin, Mrs. Richard M., 2033 Prairie La. 65804
Barnhill, Mrs. Floyd, Rt. 4, Box 58, Rogersville 65742
Beisner, Mrs. Don, 3505 S. Murphy Rd. 65804
Benson, Mrs. Ronald, 4372 Valley Dr. 65804
Bentley, Mrs. John, 1500 E. Meadowmere 65804
Berry, Mrs. Paul T., 2135 Shady Glen 65804
Blades, Mrs. Ross, 2308 Barataria 65804
Bonebrake, Mrs. McDonald O., 3853 E. Catalpa 65804
Boone, Mrs. Martin, Rt. 2, Box 315 65802
Borja, Mrs. E. R., 2912 S. Brentmoor 65804
Brent, Mrs. Lanny, 4430 S. Pratt 65804
Brian, Mrs. Wm., Jr., 2258 Barataria 65804
Broaddus, Mrs. Loren, 2409 E. Rosebrier 65804
Brown, Mrs. David, 2727 Melbourne Rd. 65804
Brown, Mrs. Lyman, 1410 N. Rogers 65802
Burkey, Mrs. Jordon W., 2405 Sheridan 65804
Busiek, Mrs. Urban J., 1635 E. Walnut 65802
Butler, Mrs. Charles F., 5757 E. Meadowmere 65804
Callaway, Mrs. Guy, 901 E. Portland 65807
Carr, Mrs. Phillip, 1260 E. Catalpa 65804
Cheek, Mrs. Anne C., 1535 E. Meadowmere 65804
Cheek, Mrs. James W., 2342 Fritts La. 65804
Christensen, Mrs. Harold, 4652 Royal Dr. 65804
Christy, Mrs. Raymond, Jr., 2738 S. Marlan 65804
Ciccone, Mrs. Pasquale, 1209 E. Holiday 65804
Clarke, Mrs. Michael J., 3530 Catalpa 65804
Clarke, Mrs. Michael S., 1227 S. Delaware 65804
Clary, Mrs. William, 2224 Edgewater 65804
Clawson, Mrs. J. W., 2257 E. Rosebrier 65804
Clayton, Mrs. E. L., 2446 Brentwood Blvd. 65804
Cochran, Mrs. Thomas, 2423 Brentwood Blvd. 65804
Coller, Mrs. Frederick C., 2108 E. Cambridge 65804
Cordonnier, Mrs. James K., Rt. 2, Box 272A 65801
Corry, Mrs. Francis, 2859 Utica 65804
Coscia, Mrs. Robert, Rt. 2, Box 272 65802
Coulter, Mrs. James W., 2134 Shady Glen 65804
Crawford, Mrs. Oral, Rt. 1, Box 443 65803
Cunningham, Mrs. Dean, 1425 S. Delaware 65804
Dillard, Mrs. Erin M., 2130 S.W. Pleasant Valley Rd. 65804
Domann, Mrs. Darrel, 4305 Ridgeview Dr. 65804
Dowell, Mrs. J. Larry, Box 39, Rt. 3, Strafford 65757
Duncan, Mrs. Robert O., 1234 E. Loren 65804
Elkins, Mrs. Ronald F., 2830 E. Glenwood 65804
Ellis, Mrs. Francis J., 2235 E. Glenwood 65804
Ellis, Mrs. Harry L., 2375 E. Rosebrier 65084
Enkvetchakull, Mrs. Boonmee, 3573 Whitehall 65804
Evans, Mrs. E. L., 2457 E. Barataria 65804
Farthing, Mrs. Gene W., 1235 E. Walnut 65802
Farthing, Mrs. Fred, 1234 E. Walnut 65802
Ferguson, Mrs. Lynn, Rt. 4, Box 376, Rogersville 65742
Ferrell, Mrs. Thomas, 1525 E. Meadowmere 65804
Fessenden, Mrs. Ersel M., 634 E. Kingsbury 65804
Fitch, Mrs. Max, Rt. 1, Box 285, Brighton 65617
Fogle, Mrs. Phillip, 2140 S. Meadowview 65804
Francis, Mrs. William C., 2820 E. Glenwood 65804
Gaska, Mrs. Walter, 5706 Sherwood 65807
Gentry, Mrs. Michael A., 2151 E. Rosebrier 65804
Gerdes, Mrs. John, 3041 E. Lamonta Dr. 65804
German, Mrs. Walter A., 2971 Southern Hills Blvd. 65804
Giddings, Mrs. Frank C., 1211 S. Pickwick 65804
Giffin, Mrs. James, Rt. 2, Box 91 65802
Gill, Mrs. Paul J., 4750 E. Bittersweet Way 65804
Glynn, Mrs. Robert, 1101 Benton 65802
Gorelick, Mrs. David F., 1041 Linwood Terr. 65807
Gose, Mrs. Don F., 1339 S. Delaware 65804
Grace, Mrs. Steve, Rt. 2, Box 308 65802
Gwin, Mrs. Edward, 5650 S. Southwood 65804
Hall, Mrs. David, Rt. 2, Rogersville 65742
Hall, Mrs. Durward G., 2442 S. Fremont 65804
Hamburg, Mrs. Fredrick, 1910 Cardinal 65804
Harmon, Mrs. Ben C., Rt. 1, Box 122, Nixa 65714
Harrison, Mrs. S. W., 815 Dennis Rd. 65804
Harvey, Mrs. Harold O., 2531 Brentwood 65804
Hawkins, Mrs. Calvin O., 4932 S. Palmer 65807
H'Doubler, Mrs. Alice, Rt. 7, Box 207 65802
H'Doubler, Mrs. F. T., Jr., 2445 Melbourne Rd. 65804
H'Doubler, Mrs. Peter B., 1137 S. Pickwick 65804
Herfkens, Mrs. Kenneth, 2818 Natural Bridge 65804
Hills, Mrs. Joe E., 2917 Natural Bridge 65804
Hinds, Mrs. Paul A., Rt. 5, Box 532 65803
Holland, Mrs. Robert, 2225 E. Edgewood 65804
Hollis, Mrs. Richard, 2236 S. Inglewood 65804
Holmes, Mrs. Daniel E., Rt. 9, 4318 Sunset 65804
Holmes, Mrs. David R., 2539 Melbourne Rd. 65804
Hrnicek, Mrs. Gary, 5509 E. Bennett 65804
Huewe, Mr. Douglas H., 2204 Claiborne 65804
Hufft, Mrs. Robert E., 2926 S. Versailles 65804
Ippensen, Mrs. John, Rt. 2, Box 3138 65802
Joy, Mrs. H. B., 5000 Shady Oaks Pl. 65804
Jobe, Mrs. Charles, 2415 E. Edgewood 65804
Johnson, Mrs. Fritz, 3015 White Oak Dr. 65804
Johnson, Mrs. Joe C., 4641 Bittersweet Way 65804
Johnson, Mrs. Warford, 2244 Edgewood 65804
Johnson, Mrs. Warford B., II, 1307 Berkshire 65804
Johnson, Mrs. William F., 973 E. Linwood Dr. 65807
Johnston, Mrs. Joseph L., 2855 Southern Hills 65804
Jones, Mrs. Harold L., 3042 Ridge Dr. 65804
Kell, Mrs. Gary A., 1744 E. Buena Vista 65804
Kelly, Mrs. James C., 5709 S. Clay 65807
Key, Mrs. James S., 2278 Inglewood 65804
Kipfer, Mrs. Robert, 4328 S. Pratt 65804
Kissell, Mrs. Richard, 2911 Melbourne Rd. 65804
Klinger, Mrs. George M., Turners 65765
Klingner, Mrs. George M., Jr., Rt. 3, Box 202, Rogersville 65742
Knabb, Mrs. Kenneth E., 1229 E. Catalpa 65804
Kobbermann, Mrs. Kobby J., 4512 S. Pratt 65804
Krahn, Mrs. Henry, 1415 S. Essex 65804
Langston, Mrs. W. Roland, 1453 S. Fairway 65804
LeFevre, Mrs. Philip, 2121 S. Deer Run La. 65804
Lemmon, Mrs. G. Bruce, 1462 Virginia 65807
Lewis, Mrs. Noel R., Rt. 1, Box 450, Strafford 65757
Litton, Mrs. Lyle, 3044 Shalimar 65804
Lockhart, Mrs. Charles E., 1600 E. Catalpa 65804
Loeb, Mrs. Richard, 4133 E. Ridge Dr. 65804
Lorenc, Mrs. Ernest, 2819 Canyon Dr. 65804
Lowe, Mrs. Arch, 1700 E. Walnut 65802
Lundman, Mrs. Hugh I., 3740 E. Linwood Dr. 65804
Lurie, Mrs. Harold, 2440 Skyline Dr. 65804
Luzecky, Mrs. Michael H., 1324 Royal Dr. 65804
Lynch, Mrs. Thomas W., Rt. 2, Box 323 65802
Maddux, Mrs. William, 2634 Inglewood Rd. 65804
Major, Mrs. Troy E. II, 3146 Glenhaven 65804
Maple, Mrs. Francis M., 2115 Edgewood 65804
McAlhany, Mrs. Howard J., 1643 E. Catalpa 65804
McCrea, Mrs. Wm. A., Rt. 1, Box 15A, Republic 65738
McKinsey, Mrs. John, 2802 Natural Bridge 65804
McLaughlin, Mrs. Richard, 2249 Wildwood Circle 65804
Menchetti, Mrs. Don E., 2040 S.W. Pleasant Valley Rd. 65804
Mentgen, Mrs. Carl, 5759 Wildwood Circle-S Dr. 65804
Michael, Mrs. Harvey R., 2838 Canyon Dr. 65804
Mihalevich, Mrs. John A., 3643 Sugar Hollow 65807
Miller, Mrs. Arthur, 1549 Holiday 65807
Miller, Mrs. David O., 2241 Cherryvale 65804
Milne, Mrs. Jay, 2947 White Oak Dr. 65804
Moore, Mrs. DeArmand, 2306 S. Meadowview 65804
Moseley, Mrs. F. Thomas, 2837 Lomita Circle 65804
Neu, Mrs. Leo T., 3008 Carlisle Circle 65804
Olson, Mrs. E. Rule, 2645 Wildwood Rd. 65804
Overend, Mrs. Don, 3020 Ridge Dr. 65804
Palcheff, Mrs. Chris L., 3842 E. Catalpa 65804
Penninger, Mrs. William H., 2246 Claiborne 65804
Peterson, Mrs. Stanley S., 721 E. Stanford 65807
Pfeiffer, Mrs. Ralph, Jr., 2933 S. Chambery 65804
Pinckley, Mrs. James N., 2949 Natural Bridge 65804
Plumlee, Mrs. W. C., 919 E. Walnut 65806
Podrecca, Mrs. Guido, 2925 Chambery 65804
Powell, Mrs. Edwin, 1226 S. Weller 65804
Prater, Mrs. Bill George, 3000 Carlisle Circle 65804
Pruett, Mrs. Paul L., 2000 S.W. Pleasant Valley Rd. 65804
Quinn, Mrs. Paul, Rt. 1, Box 181-E, Strafford 65757
Raborar, Mrs. Arteso C., 5650 Woodcliff Dr. 65804
Riesenberg, Mrs. Donald, 1350 E. Delmar 65804
Robinson, Mrs. Gary L., 1301 S. Oak Run 65804
Ruff, Mrs. Paul G., 2916 S. Versailles 65804
Sammon, Mrs. T. James, 1526 S. Devon 65804
Scanlon, Mrs.Robert, 2145 E. Edgewood 65804
Schaeffer, Mrs. Edward, 2356 Wildwood Circle 65804
Schreiber, Mrs. Norman, 3448 E. Linwood 65804
Schroff, Mrs. Carle H., 2448 E. Broadmoor 65804
Schwartz, Mrs. Eugene J., 1315 E. Loren 65804
Schweitzer, Mrs. Fred C., 2550 S. Luster 65804
Shackter, Mrs. Bruce, 1538 Essex 65804
Shaeffer, Mrs. James T., 3657 Sugar Hollow 65804
Shane, Mrs. Ramon, 2910 Wildwood Rd. 65804
Shelton, Mrs. R. Wayne, Rt. 2, Box 215A, Willard 65781
Siceluff, Mrs. Joseph G., 3820 E. Eldorado Rd., RFD 18 65804
Silsby, Mrs. Don J., 800 E. Brookside 65807
Simpson, Mrs. E. L., 2133 Meadowview 65804
Smith, Mrs. Wallis, 1223 S. Kentwood 65804
Snead, Mrs. William H., 2532 Sheridan 65804
Sponenberg, Mrs. Don, 2905 Versailles 65804
Stamatis, Mrs. John J., 2830 S. Chantilly 65804
Stehr, Mrs. Christian, 3124 S. Marlan 65804
Stewart, Mrs. R. Wendell, 2028 Windsor Dr. 65807
Stufflebaum, Mrs. Robert E., 2323 E. Rosebrier
Sturtevant, Mrs. Harwood N., 3935 E. Eldorado Rd., Rt. 18 65804
Sullivan, Mrs. Dan T., 3801 E. Catalpa 65802
Suva, Mrs. Morfeo M., 1915 E. Swallow 65804
Tarrasch, Mrs. Ernest, 2114 Langston 65804
Terry, Mrs. James F., Jr., Rt. 2, Box 190 65802
Thomasson, Mrs. David O., 2311 E. Glenwood 65804
Tillman, Mrs. Walter, 1220 E. Loren 65804
Tombridge, Mrs. T. L., 2830 S. Marlan 65804
Trotter, Mrs. W. Yates, 1243 E. Catalpa 65804
Tsang, Mrs. John 3514 E. Cherry 65804
Turner, Mrs. Glenn O., 1462 S. Dollison 65807
Upshaw, Mrs. Paul, 2118 S. Fairway 65804
Vensel, Mrs. Lee H., Jr., 2255 Meadowview 65804
Wachter, Mrs. Ronald M., 4208 Oak Knolls 65804
Waddell, Mrs. Kenneth, RT. 2, Box 144-c, Pleasant Hope, Mo. 65725
Wakeman, Mrs. J. Newton, 1402 Meadowmere 65804
Walker, Mrs. Gary, 2536 S. Camber 65804
Walker, Mrs. William M., 2845 Southern Hills Blvd. 65804
Warres, Mrs. Herbert L., 2614 Inglewood Rd. 65804
Waterfield, Mrs. Jim, 2565 Sheridan 65804
Webb, Mrs. Richard, 1243 E. Loren 65804
White, Mrs. R. Ned, 3634 Cherry 65804
Wilson, Mrs. Roy E., Rt. 1, Box 210-A, Rogersville 657
Winsky, Mrs. Arlen O., 3031 E. Rocklyn 65804
Wise, Mrs. Gordon F., 2850 Southern Hills 65804
Wittmer, Mrs. Samuel C., 2314 E. Washita 65804
Wolf, Mrs. Marion L., 4303 E. Valley Rd. 65804
Wong, Mrs. George, 2908 Avalon 65804
Wooldridge, Mrs. Wilfred E., 1126 E. Stanford 65807
Wyrsch, Mrs. Leo, 2222 S. Meadowview 65804
Zahn, Mrs. Robert, 1030 Brookside 65807

JACKSON COUNTY
(Kansas City)

Abella, Mrs. Ben Z., 8967 E. 62nd Terr. 64133
Abend, Mrs. Melvin N., 848 W. 52nd Terr. 64112
Abercrombie, Mrs. Keith, 8100 El Monte, Shawnee Missio Kan. 66208
Abrams, Mrs. Bernard M., 1021 W. 69th 64113
Adelman, Mrs. Arthur, 6305 Aberdeen, Shawnee Mission Kan. 66208
Agee, Mrs. Loren Glenn, Rt. 1, Rantoul, Kan. 66079
Aks, Mrs. Daniel, 3100 W. 68th, Shawnee Mission, Kan 66208
Alderman, Mrs. Thomas F., 309 E. 127th 64145
Ammatelli, Mrs. F. J., 1235 W. 57th Terr. 64113
Amoury, Mrs. Raymond A., 2016 W. 81st, Leawood, Kan 66206
Andrus, Mrs. Bailey C., 6508 Overbrook Rd., Shawnee Mission, Kan. 66208
Anthnu, 3807 W. 171St., Stillwell 66085
Arbab, Mrs. Ali A., 2415 W. 67th, Shawnee Mission, Ka 66208
Arms, Mrs. Arnold V., 450 N. Pryor, Lee's Summit 6406
Arms, Mrs. Richard A., 9918 High Dr., Leawood, Kan. 662
Atcheson, Mrs. Bellfield, 2111 W. 70th Terr., Shawnee Mission, Kan. 66208
Badeen, Mrs. Louis, 3400 Shady Bend Dr., Independenc 64052
Balanoff, Mrs. Arnold Z., 2500 W. 71st, Shawnee Missio Kan. 66208
Ballard, Mrs. V. Bryce, 6618 Rainbow, Shawnee Mission Kan. 66208
Barelli, Mrs. Pat A., 5609 Mission Dr., Shawnee Mission Kan. 66208
Barnard, Mrs. John L., 825 W. 52nd 64112
Barr, Mrs. Glenn A., 9615 Grandview Rd. 64137
Barry, Mrs. John W., 5510 W. 84th, Shawnee Mission, Ka 66207
Barry, Mrs. William B., Sulgrave Apts., 121 W. 48th 6411
Basantz, Mrs. F. Victor, 2025 W. 91st, Shawnee Mission Kan. 66206
Battmer, Mrs. Robert E., 4964 Westwood Terr. 64112
Bauer, Mrs. Lafe W., 4818 W. 80th, Prairie Village, Kan 66208
Beall, Mrs. M. S., 3308 W. 68th, Shawnee Mission, Kan 66208
Beatty, Mrs. Eugene C., 4923 W. 96th Terr., Shawnee Mission, Kan. 66207
Becker, Mrs. Rolphe A., 6501 Wenonga, Shawnee Missio Kan. 66208
Beesley, Mrs. Charles V., 741 W. 121st 64145
Behrends, Mrs. Steven H., 10921 E. 71st Terr. 64133
Bell, Mrs. William F., 214 Oxford La., Lee's Summit 6406
Bennett, Mrs. J. O., 4315 W. 111th Terr., Leawood, Ka 66211
Benoit, Mrs. Hector W., 2501 W. 64th, Shawnee Missio Kan. 66208
Berenson, Mrs. Sheldon E., 832 W. 63rd 64113
Bickley, Mrs. James E., 3004 W. 83rd Terr., Leawood, Ka 66206
Biggs, Mrs. Alfred O., Jr., 6551 Wenonga Terr., Shawne Mission, Kan. 66208
Bikales, Mrs. Victor W., 10688 Riggs Dr., Overland Park, Kan. 66212
Bishop, Mrs. Francis, 3208 W. 83rd Terr., Leawood, Ka 66206
Black, Mrs. Thomas C., 6411 Belinder Rd., Shawnee Mission, Kan. 66208
Blim, Mrs. Richard Don, 2209 W. 68th, Shawnee Missio Kan. 66208
Borsuk, Mrs. Gregory M., 16525 E. 36th, Independence 64055
Bowser, Mrs. John F., 3701 Madison 64111
Boyd, Mrs. George K., 4810 W. 80th, Shawnee Mission, Ka 66208
Braby, Mrs. Howard, 512 Linwood Terr., Independence 64050
Brand, Mrs. Stanley N., 4303 W. 93rd Terr., Shawnee Mission, Kan. 66207
Braverman, Mrs. Abe E., 2701 W. 68th, Shawnee Missio Kan. 66208
Brick, Mrs. Jeffrey, 3012 W. 83rd Terr., Shawnee Missio Kan. 66206
Brower, Mrs. Clyde, 118 S. Willis, Independence 64050
Brown, Mrs. Adrian J., 12 E. 63rd 64113
Brown, Mrs. Elwyn S., 200 W. 115th 64114
Brown, Mrs. Menzie H., 9421 Ralston 64138

own, Mrs. Robert S., 6800 Tomahawk Rd., Shawnee Mission, Kan. 66208
rown, Mrs. William R., 8717 Rosewood Dr., Shawnee Mission, Kan. 66207
rowne, Mrs. Jon E., 2501 N. 69th, Shawnee Mission, Kan. 66208
rumm, Mrs. L. W., 7421 Wyoming 64114
uckner, Mrs. Robert C., 3507 W. 87th, Leawood, Kan. 66206
udke, Mrs. Harold A., 1219 W. 66th Terr. 64113
uhler, Mrs. Victor B., 5212 Bellview 64112
affrey, Mrs. Raymond J., 1314 W. Red Bridge Rd. 64114
alovich, Mrs. Emery, 3500 W. 49th, Shawnee Mission, Kan. 66205
ampbell, Mrs. John, 6233 Howe Dr., Shawnee Mission, Kan. 66205
anent, Mrs. Ramon V., Jr., 309 W. 115 Terr. 64114
apps, Mrs. Eugene C., 7921 El Monte, Shawnee Mission, Kan. 66208
arlson, Mrs. Hjalmar E., 2709 W. 66th, Shawnee Mission, Kan. 66208
armichael, Mrs. Francis A., 5841 High Dr., Shawnee Mission, Kan. 66208
aruso, Mrs. Alfred A., 2018 W. 70th Terr., Shawnee Mission, Kan. 66208
ase, Mrs. William F., 4913 W. 97th, Shawnee Mission, Kan. 66207
entner, Mrs. Paul J., 4304 W. 66th, Shawnee Mission, Kan. 66208
hambers, Mrs. James Q., 5500 Belinder Ave., Shawnee Mission, Kan. 66205
handler, Mrs. Robert A., 4618 Warwick, Apt. 5A 64112
hilds, Mrs. Richard M., 5800 Windsor Dr., Shawnee Mission, Kan. 66205
howdhury, Mrs. Dipak, 2728 Seminole Dr., Independence 64057
hung, Mrs. Richard, 4406 North Lake, Lee's Summit 64063
ark, Mrs. Irving H., 2811 Blue Ridge Ext., Grandview 64030
ockerell, Mrs. Sanford F., 3051 S. Crysler, Independence 64050
offey, Mrs. Ralph R., 5211 Wornall Rd. 64112
ohen, Mrs. Lawrence S., 6724 Willow La., Mission Hills, Kan. 66208
olom, Mrs. George A., 4002 W. 56th, Shawnee Mission, Kan. 66205
onn, Mrs. Robert, 3725 W. 64th, Shawnee Mission, Kan. 66208
oppinger, Mrs. Thomas A., 8 E. 55th Terr. 64113
otton, Mrs. Thomas R., 6908 Valley Rd. 64113
owan, Mrs. George, Arapaho TR., Lake Quivira, Kansas City, Kan. 66106
ouch, Mrs. Thomas T., 6300 Indian Lane, Shawnee Mission, Kan. 66208
ow, Mrs. Martin, 3011 W. 84th, Leawood, Kan. 66206
irts, Mrs. Calvin J., 5730 Metcalf Ct., Shawnee Mission, Kan. 66202
ilton, Mrs. Timothy, 11841 Oak 64114
irnell, Mrs. Dale, 8317 Fontana, Prairie Village, Kan. 66207
avis, Mrs. Donald R., 2501 W. 67th, Shawnee Mission, Kan. 66208
avis, Mrs. Herbert U., 2804 W. 50th Terr., Shawnee Mission, Kan. 66205
avis, Mrs. Jack M., 7110 Harecliff Dr. 64133
evis, Mrs. Richard, 8919 Mission Rd., Leawood, Kan. 66206
Feo, Mrs. Theodore, 4100 W. 90th Terr., Shawnee Mission, Kan. 66207
mott, Mrs. John O., 3618 Sunrise Dr., Sebring, Fla. 33870
mpsey, Mrs. Herbert A., 806 Chestnut, Lee's Summit 64063
nnie, Mrs. Charles C., 121 W. 48th 64112
mond, Mrs. E. Grey, 2501 Holmes 64108
abal, Mrs. L. J., 3729 Blue Ridge Blvd., Independence 64052
abal, Mrs. Luke J., Jr., 3930 Sequoia, Lee's Summit 64063
dge, Mrs. Mark, 7909 Bristal Court, Shawnee Mission, Kan. 66208
mbeck, Mrs. Stan, 8927 Maple Dr., Shawnee Mission, Kan. 66207
nokoe, Mrs. Charles, 1216 W. 72nd 64114
wney, Mrs. James W., 6906 W. 52nd Pl., Shawnee Mission, Kan. 66202
ake, Mrs. Roy F., 6600 Outlook, Shawnee Mission, Kan. 66202
sko, Mrs. Robert M., 2100 Stratford Rd., Shawnee Mission, Kan. 66208
nleavy, Mrs. James O., 11330 Madison 64114
rie, Mrs. Robert H., 8446 Juniper La., Shawnee Mission, Kan. 66207
rnell, Mrs. Monaford O., 308 Lincolnwood, Lee's Summit 64063
rnest, Mrs. James B., 1250 W. 59th 64113
gea, Mrs. Fernando M., 9916 Perry Dr., Shawnee Mission, Kan. 66212
emann, Mrs. Gustave, 6520 Overhill Rd., Shawnee Mission, Kan. 66208

Elias, Mrs. David J., 22 E. Tapawingo, Blue Springs 64015
Ellfeldt, Mrs. Howard, 8544 Roe Blvd., Prairie Village, Kan. 66207
Elliott, Mrs. R. Glenn, 6136 Reinhardt Dr., Shawnee Mission, Kan. 66205
Englemann, Mrs. Calvin E., 2000 W. 68th, Shawnee Mission, Kan. 66208
Engleman, Mrs. Reinhold, 11905 Avila Ct. 64114
Ericsson, Mrs. Samuel E., 9065 Rosewood, Shawnee Mission, Kan. 66207
Etzenhousen, Mrs. Merrill, 3318 Oxford, Apt. O., Independence 64052
Eubank, Mrs. Dillard M., 6020 Elm 64133
Eubank, Mrs. Will R., 6113 Lane 64133
Eubank, Mrs. William Y., 1020 W. 60th Terr. 64113
Evans, Mrs. Lawrence L., 1025 W. 64th Terr. 64113
Fairchild, Mrs. Robert C., 8425 Reinhardt La., Leawood, Kan. 66206
Farnsworth, Mrs. Jesse J., 5608 Fairway, Shawnee Mission, Kan. 66205
Fedotin, Mrs. Michael, 3019 W. 84th, Shawnee Mission, Kan. 66206
Fee, Mrs. Chester, Rt. 1, Stillwell, Kan. 66085
Feist, Mrs. William E., 10618 W. 98th Terr., Shawnee Mission, Kan. 66214
Fibuch, Mrs. Eugene, 9825 Lee Circle, Shawnee Mission, Kan. 66206
Fischer, Mrs. Jose, 8515 W. 71st, Shawnee Mission, Kan. 66204
Fitzgerald, Mrs. Robert H., 8505 Cherokee Pl., Shawnee Mission, Kan. 66206
Flately, Mrs. John A., 827 Huntington Rd. 64113
Flynn, Mrs. James M., 5720 High Dr., Shawnee Mission, Kan. 66208
Folck, Mrs. William P., 5804 N.W. 72nd 64151
Forman, Mrs. Louis H., 2801 W. 67th, Shawnee Mission, Kan. 66208
Fortin, Mrs. David, 824 W. 56th 64113
Fouts, Mrs. Dallas, Sr., Box 124, Rt. 1, Lee's Summit 64063
Fowler, Mrs. Fred O., 1247 W. 67th Terr. 64113
Fowler, Mrs. James W., 200 W. 53rd Terr. 64112
Fredeen, Mrs. Robert C., 5437 Canterbury Rd., Shawnee Mission, Kan. 66205
Freiden, Mrs. Floyd J., 9001 Maple, Shawnee Mission, Kan. 66207
Frick, Mrs. J. Paul, 4740 Roanoke Pkwy., Apt. 905 64112
Fritzlen, Mrs. Thomas J., 825 W. 63rd 64113
Ganley, Mrs. William Coyle, 9927 Walnut Dr., Apt. 103 64114
Garner, Mrs. James H., 10201 Howe Dr., Shawnee Mission, Kan. 66206
Garrison, Mrs. Roy F., 404 W. 67th Terr. 64113
Gauthier, Mrs. Charles P., 11319 Summit 64114
Geha, Mrs. Braham J., 4 Wycklow, Shawnee Mission, Kan. 66207
Geiger, Mrs. W. A., Jr., 3506 W. 92nd Terr., Leawood, Kan. 66206
Gibbons, Mrs. Robert T., Jr., 8422 Reinhardt La., Shawnee Mission, Kan. 66206
Gilgore, Mrs. Alfred, 8903 Cedar Lane, Shawnee Mission, Kan. 66207
Ginsberg, Mrs. Norman A., 1220 W. 67th 64113
Gist, Mrs. W. W., 1230 W. 66th 64113
Givler, Mrs. Robert L., 408 Hargis La., Belton 64012
Glasscock, Mrs. Ernest L., 6214 High Dr., Shawnee Mission, Kan. 66208
Glatter, Mrs. Thomas R., 12616 Cherokee La., Leawood, Kan. 66209
Goldman, Mrs. Stanley, 5734 Windsor Dr., Shawnee Mission, Kan. 66205
Goldsich, Mrs. Edward, 5115 W. 81st, Shawnee Mission, Kan. 66208
Goldstein, Mrs. Marvin F., 901 W. 113th Terr. 64114
Goodson, Mrs. W. H., 815 W. 59th 64113
Goolsbee, Mrs. Robert, 6438 Sagamore Rd., Shawnee Mission, Kan. 66208
Gordon, Mrs. Morris P., 10527 Walnut Dr. 64114
Gottsch, Mrs. Joseph C., 7904 Granada, Prairie Village, Kan. 66208
Green, Mrs. John R., Jr., 3143 Santa Fee Terr., Independence 64055
Guastello, Mrs. Mario, 2308 Arno Rd., Shawnee Mission, Kan. 66208
Gustafson, Mrs. Jon E., 4510 N. Lake Dr., Lee's Summit 64063
Gutek, Mrs. E. Philip, 6508 State Line Rd, Shawnee Mission, Kan. 66208
Haas, Mrs. Henry O., 5330 W. 100th, Shawnee Mission, Kan. 66207
Habib, Mrs. Henry N., 440 E. 74th Terr. 64131
Hagar, Mrs. David L., 8800 E. 62nd, Raytown 64133
Hahn, Mrs. Fred, 12001 E. 48th Terr. 64133
Haight, Mrs. J. Max, 5609 Blue Ridge Blvd. 64133
Hall, Mrs. John C., 5202 W. 79th Terr., Prairie Village, Kan. 66208
Halperin, Mrs. Phillip H., 8348 Summersit Dr., Prairie Village, Kan. 66207
Hamlin, Mrs. Howard, 4017 W. 100th Pl., Shawnee Mission, Kan. 66207
Hamtid, Mrs. Lawrence, 9622 Sagamore Rd., Shawnee Mission, Kan 66206

Hanson, Mrs. E. Jerome, Jr., 3801 W. 63rd, Shawnee Mission, Kan. 66204
Hartwig, Mrs. Fred H., 5204 Pawnee Dr., Shawnee Mission, Kan. 66205
Hartwig, Mrs. Raymond W., 6546 Wenonga Rd., Shawnee Mission, Kan. 66208
Hausheer, Mrs. Herman, 12900 E. 36th Terr., Independence 64050
Haynes, Mrs. Solon, 121 W. 73rd 64114
Hazuka, Mrs. David F., 9124 Catalina, Prairie Village, Kan. 66207
Helman, Mrs. Richard G., 6540 Wenonga Rd., Shawnee Mission, Kan. 66208
Herdoiza, Mrs. Alfonso W., 5300 W. 98th Terr., Overland Park, Kan. 66207
Hervey, Mrs. William H., II, 6601 Overhill Rd., Shawnee Mission, Kan. 66208
Hibbard, Mrs. Blaine Z., 8410 Belinder, Shawnee Mission, Kan. 66206
Hickerson, Mrs. William H., 4207 S. Crysler, Independence 64050
Hill, Mrs. J. H., 8115 Meadow La., Leawood, Kan. 66206
Hoadley, Mrs. William O., 2608 W. 70th, Shawnee Mission, Kan. 66208
Hodgson, Mrs. Frank H., 1049 W. 55th 64113
Hoeper, Mrs. Samuel D., 12921 Grandview Rd. 64030
Hoeper, Mrs. Sam D., Jr., 12516 Grandview Rd., Grandview 64040
Hoffman, Mrs. Alan L., 11330 Jefferson 64114
Hollinger, Mrs. Lloyd A., 4403 W. 93rd Terr., Shawnee Mission, Kan. 66207
Holman, Mrs. Joseph, 5208 Bekkeview 64112
Hollweg, Mrs. Kenneth C., 808 W. Meyer Blvd. 64113
Holton, Mrs. Edward B., 2817 Westport Rd., Independence 64052
Hughes, Mrs. Michael, 4930 W. 97th, Shawnee Mission, Kan. 66207
Hunkeler, Mrs. John O., 5326 Mission Woods Rd., Shawnee Mission, Kan. 66205
Hunt, Mrs. Thomas R., 6336 Ensley La., Shawnee Mission, Kan. 66208
Hunzicker, Mrs. Warren, 1248 Stratford Rd. 64113
Huseman, Mrs. Richard, 8801 W. 97th, Overland Park, Kan. 66212
Hyde, Mrs. Lawrence L., 5020 W. 67th, Shawnee Mission, Kan. 66208
Ingham, Mrs. Walton C., 9723 Overbrook Rd., Shawnee Mission, Kan. 66206
Irvine, Mrs. John, 2500 Red Bridge Terr. 64131
Jacob, Mrs. Wlater P., 5301 W. 83rd Terr., Shawnee Mission, Kan. 66207
Jacobs, Mrs. Morton, 6416 Verona Rd., Shawnee Mission, Kan. 66208
Jacobs, Mrs. Walter H., 6656 Milhaven Dr., Shawnee Mission, Kan. 66202
Janes, Mrs. Donald R., 14831 W. 90th, Lenexa, Kan. 66215
Johnson, Mrs. C. Laurence, 729 S. 53rd, Kansas City, Kan. 66106
Johnson, Mrs. Warren L., 3824 W. 57th Terr., Shawnee Mission, Kan. 66205
Jonas, Mrs. Harry S., 207 Spruce, Lee's Summit 64063
Jones, Mrs. Gale O., 6208 Reinhardt Dr., Shawnee Mission, Kan. 66205
Jones, Mrs. Samuel T., 9915 Cherokee La., Shawnee Mission, Kan. 66206
Jones, Mrs. T. Reid, 6341 Roe, Shawnee Mission, Kan. 66208
Jouvenat, Mrs. Neil, 1016 W. 58th 64113
Justus, Mrs. John B., 5221 Howe Dr., Shawnee Mission, Kan. 66205
Kandt, Mrs. Ray E., Jr., 8900 Maple Dr., Shawnee Mission, Kan. 66207
Kantor, Mrs. Julius M., 6708 High Dr., Shawnee Mission, Kan. 66208
Kayanan, Mrs. Jose, 200 W. 100th Terr. 64114
Keeler, Mrs. James E., 425 E. Meyer Blvd. 64131
Keeling, Mrs. Douglas, 11021 W. 96th Terr., Shawnee Mission, Kan. 66214
Keltner, Mrs. Raymond O., 8900 Pawnee La., Leawood, Kan. 66206
Kendall, Mrs. Gene, 10109 Howe Dr., Shawnee Mission, Kan. 66206
Kennedy, Mrs. Fred R., 8022 El Monte, Prairie Village, Kan. 66208
Kent, Mrs. Bela, 5839 Cherokee, Shawnee Mission, Kan. 66205
Kettner, Mrs. Edward G., 6510 Milhaven Dr., Shawnee Mission, Kan. 66202
Kiene, Mrs. Richard H., 6429 Overbrook Rd., Shawnee Mission, Kan. 66208
Killen, Mrs. Duncan A., 1909 W. 70th, Shawnee Mission, Kan. 66208
Kindred, Mrs. Lynn H., 4606 W. 82nd Terr., Prairie Village, Kan. 66208
Kirchmer, Mrs. John T., 2708 W. 66th, Shawnee Mission, Kan. 66208
Kitchen, Mrs. W. M., 2700 W. 68th, Shawnee Mission, Kan. 66208
Knoch, Mrs. H. Kermit, 6606 Willow La., Shawnee Mission, Kan. 66208

Koppers, Mrs. Lawrence E., 9304 Lee Ct., Leawood, Kan. 66206
Kurtz, Mrs. Karl J., 10012 Wedd Dr., Shawnee Mission, Kan. 66212
Kyger, Mrs. John E., 3612 Blue Ridge, Independence 64052
Lamar, Mrs. Robert F., Box 8165, Kansas City 64112
Lambie, Mrs. Rodger W., 10317 Grant La., Shawnee Mission, Kan. 66212
Landis, Mrs. George K., 9826 Shepherd's Cir. 64131
Larsen, Mrs. William E., 10311 Belinder Rd., Leawood, Kan. 66206
Latham, Mrs. Raymond W., 3008 W. 67th, Shawnee Mission, Kan. 66208
Lauer, Mrs. Daniel J., 8718 Cherokee La., Leawood, Kan. 66206
Layle, Mrs. John K., 5800 High Dr., Shawnee Mission, Kan. 66208
Layton, Mrs. Ira, 6511 W. 67th, Shawnee Mission, Kan. 66202
Lee, Mrs. Gerald B., 13412 E. 51st 64133
Lee, Mrs. Henry A., 9821 Sagamore Rd., Leawood, Kan. 66206
Lee, Mrs. King Y., 5825 Pembroke Ct., Shawnee Mission, Kan. 66208
Lentz, Mrs. Calvin, 55th Terr. & Noland Rd. 64133
Lentz, Mrs. Clark H., 2600 W. 69th, Shawnee Mission, Kan. 66208
Lewitton, Mrs. Solomon, 4810 W. 96th, Shawnee Mission, Kan. 66207
Lie, Mrs. Huie, 8110 Rosehill Rd., Shawnee Mission, Kan. 66215
Lindgren, Mrs. Carleton J., 12805 E. 38th, Independence 64055
Link, Mrs. Vance E., 1201 W. 36th, Independence 64050
Long, Mrs. R. Stacy, Lot Z-56, Lake Latawana 64063
Loutzenhiser, Mrs. James K., 11405 Jefferson 64114
Luetje, Mrs. Charles M., 9519 Connell Dr., Overland Park, Kan. 66212
Lulo, Mrs. Antonio, 8726 Cherokee La., Leawood, Kan. 66206
Lyddon, Mrs. H. R., Jr., 1221 W. 67th 64113
MacNaughton, Mrs. Ralph E., 17 Wycklow, Overland Park, Kan. 66207
Mallouck, Mrs. Alexander G., 6508 W. 102nd, Shawnee Mission, Kan. 66212
Mangels, Mrs. Kenneth A., Jr., 1103 W. 36th Terr., Independence 64055
Mangum, Mrs. William B., 5780 Bower Ave. 64133
Mantz, Mrs. Herbert L., 1209 Romany Rd. 64113
Marks, Mrs. Mark M., 6537 Summit 64113
Martin, Mrs. Clyde V., 5531 E. Mission Dr., Shawnee Mission, Kan. 66208
Masucci, Mrs. Joseph M., 11800 Washington 64114
Mayer, Mrs. John H., Jr., 5739 Windsor Dr., Shawnee Mission, Kan. 66205
McCallister, Mrs. Ben O., 6431 Norwood, Shawnee Mission, Kan. 66212
McCanse, Mrs. Lynn, 621 Westover Rd. 64113
McClanahan, Mrs. Robert C., 310 W. 49th, Apt. 502 64112
McConahay, Mrs. David R., 6225 Indian La., Shawnee Mission, Kan. 66208
McCoy, Mrs. Frederick J., 5814 Mission Dr., Shawnee Mission, Kan. 66208
McDonald, Mrs. Herbert L., 11830 Central 64114
McDonnell, Mrs. John F., 5411 Central 64112
McGannon, Mrs. Paul, 2201 Arno Rd., Shawnee Mission, Kan. 66208
McIntosh, Mrs. Donald E., 12709 Oakmont Dr. 64145
McKee, Mrs. Wallace, 2335 Guilford La., Shawnee Mission, Kan. 66208
McNabney, Mrs. W. Kendall, 5319 Oak 64112
Medlicott, Mrs. William, 426 N. Winnebago, Greenwood 64034
Meegan, Mrs. Robert J., 401 W. 119th Terr. 64145
Mehta, Mrs. Satish K., 2307 E. 109th 64131
Melgaard, Mrs. S. Ross, 1012 W. 61st Terr. 64113
Meyer, Mrs. Paul W., 5160 Sunset Dr. 64112
Meyers, Mrs. Harold L., 3001 W. 71st, Shawnee Mission, Kan. 66208
Miles, Mrs. George O., 9020 Mission Rd., Shawnee Mission, Kan. 66206
Miller, Mrs. Gerald L., 836 W. 51st 64112
Miller, Mrs. Max I., 5620 High Dr. 66208
Miller, Mrs. Wilson H., 6400 Verona Rd., Shawnee Mission, Kan. 66208
Mitchell, Mrs. Andrew O., 4013 W. 73rd Terr., Shawnee Mission, Kan. 66208
Mitchell, Mrs. John O., 6104 Lockton La., Shawnee Mission, Kan. 66205
Mitra, Mrs. Nirmal, 2007 W. 81st Terr , Shawnee Mission, Kan. 66206
Mixson, Mrs. William C., 6501 Sagamore Rd., Shawnee Mission, Kan. 66208
Montello, Mrs. Samuel A., 4109 Delmar Dr., Prairie Village, Kan. 66208
Mooney, Mrs. Marcel L., 2902 W. 67th Terr., Shawnee Mission, Kan. 66208
Moore, Mrs. David L., 1020 W. 59th 64113
Moore, Mrs. Jack O., 2002 W. 67th Terr., Shawnee Mission, Kan. 66208
Moore, Mrs. Robert A., 10818 W. 102nd, Shawnee Mission, Kan. 66214
Moreano, Mrs. Aramando H., 8417 Nall, Prairie Village, Kan. 66207
Morgan, Mrs. David B., 6513 Jefferson 64113
Morris, Mrs. Joseph H. Jr., 5017 George 64133
Mosbacher, Mrs. Hugh E., 919 Court Lake Dr., Independence 64055
Mueller, Mrs. M. J., 11723 Central 64114
Mullen, Mrs. Leo M., 1900 W. 68th, Shawnee Mission, Kan. 66208
Murphy, Mrs. Robert J., 6428 High Dr., Shawnee Mission, Kan. 66208
Myers, Mrs. George H., 12712 High Dr., Leawood, Kan. 66209
Nesselrode, Mrs. John H., 12000 Marbec Trail, Independence 64052
Noback, Mrs. R. K., 628 W. 67th 64113
Noltensmeyer, Mrs. Milton, 3305 W. 50th Terr., Shawnee Mission, Kan. 66205
O'Farrell, Mrs. Thomas, 2000 Stratford Rd., Shawnee Mission, Kan. 66208
Overesch, Mrs. Harry B., 10804 Grandview Rd. 64137
Owens, Mrs. James, 1258 Huntington Rd. 64113
Ozar, Mrs. Milton B., 1206 W. 62nd 64113
Padfield, Mrs. Earl G., 310 W. 49th 64112
Padula, Mrs. Richard, 2001 W. 68th, Shawnee Mission, Kan. 66208
Payne, Mrs. J. Ralph, 4460 Rockhill Rd. 64110
Penner, Mrs. Stanley, 4302 W. 93rd Terr., Shawnee Mission, Kan. 66207
Perll, Mrs. Maurice F., 830 W. 61st Terr. 64113
Perry, Mrs. Ralph, 7140 Sni-A-Bar Rd. 64129
Peterson, Mrs. George, 4806 W. 68th, Shawnee Mission, Kan. 66208
Peterson, Mrs. Jay T., 4312 W. 74th, Prairie Village, Kan. 66208
Piebenga, Mrs. Larry W., 4010 W. 57th, Fairway, Kan. 66205
Piepergerdes, Mrs. Larry G., 288 Winnebago Dr., Lake Winnebago 64034
Pinkerton, Mrs. Joseph A., Jr., 6215 Ensley La., Shawnee Mission, Kan. 66208
Piper, Mrs. Donald K., 9929 High Dr., Shawnee Mission, Kan. 66206
Pollak, Mrs. Erik, 8940 Nall Ave., Shawnee Mission, Kan. 66207
Porter, Mrs. Louis, 6017 McGee 64113
Porter, Mrs. Michael, 6925 Belinder, Shawnee Mission, Kan. 66208
Pugh, Mrs. Richard G., H27 Lake Lotawana 64063
Quer, Mrs. Erich A., 1901 Stratford Rd., Shawnee Mission, Kan. 66208
Raich, Mrs. Robert A., 828 Greenway Terr. 64113
Ramey, Mrs. Ehret, 8108 Ward Parkway Plaza 64114
Rau, Mrs. Jerold, 6024 Morningside Dr. 64113
Rector, Mrs. Joe Lee, Jr., 3915 W. 53rd, Shawnee Mission, Kan. 66205
Reinhardt, Mrs. G. Robert, 1201 Romany Rd. 64113
Reynolds, Mrs. James, 4948 Somerset, Shawnee Mission, Kan. 66207
Rice, Mrs. Gerard F., 8431 Juniper La., Shawnee Mission, Kan. 66207
Riller, Mrs. L. E., 1267 W. 61st 64113
Roberts, Mrs. Fred, 9221 Pawnee La., Shawnee Mission, Kan. 66206
Robinson, Mrs. Arthur W., 6600 Wenonga Rd., Shawnee Mission, Kan. 66208
Robinson, Mrs. James Travis, Jr., 4203 W. 92nd Terr., Shawnee Mission, Kan. 66207
Rodgers, Mrs. George H., 10041 El Monte La., Shawnee Mission, Kan. 66207
Romito, Mrs. Anthony J., 9015 Lamar, Shawnee Mission, Kan. 66207
Roth, Mrs. Alfred O., 6644 Outlook, Mission, 66202
Rozen, Mrs. Jay O., 2408 Arno Rd., Shawnee Mission, Kan. 66208
Rubin, Mrs. Harvey P., 4606 W. 87th Terr., Shawnee Mission, Kan. 66207
Rubin, Mrs. Sidney, 1287 W. 72nd 64114
Rutherford, Mrs. Barry, 5001 W. 66th Terr., Shawnee Mission, Kan. 66208
Sabates, Mrs. Felix, 2503 W. 70th Terr., Shawnee Mission, Kan. 66208
Sanders, Mrs. Donald, 200 Avila Circle 64114
Sanders, Mrs. William F., 1004 W. 66th Terr. 64113
Sauer, Mrs. Gordon C., 830 W. 58th Terr. 64113
Scharf, Mrs. Daniel, 2502 W. 69th Terr., Shawnee Mission, Kan. 66208
Schiffmacher, Mrs. Jack E., 4517 W. 65th, Prairie Village, Kan. 66208
Schillie, Mrs. Gene A., 7010 Overhill Rd., Shawnee Mission, Kan. 66212
Schlozman, Mrs. Daniel L., 6600 Overhill Rd., Shawnee Mission, Kan. 66208
Schoolman, Mrs. Arnold, 8705 Catalina Dr., Shawnee Mission, Kan. 66207
Schottman, Mrs. Gerhard W., Jr., 5110 W. 96th Terr., Shawnee Mission, Kan. 66207
Schwegler, Mrs. Robert, 10235 Catalina, Shawnee Mission, Kan. 66207
Seeley, Mrs. Clark W., 3000 W. 68th, Shawnee Mission, Ka 66208
Seiden, Mrs. Gerald O., 2509 W. 71st, Prairie Village, Ka 66208
Sells, Mrs. Kenneth J., 5930 Mission Dr., Shawnee Missio Kan. 66208
Shalley, Mrs. Jack E., 14401 E. 44th, Independence 6405
Sheahon, Mrs. John, 7037 Lakeshore Dr., Raytown 641
Sheldon, Mrs. Russell O., 816 W. 58th Terr. 64113
Shifrin, Mrs. Alexander, 1027 W. 69th Terr. 64113
Simon, Mrs. Sanford, 5820 Mission Dr., Shawnee Missior Kan. 66208
Singleton, Mrs. Charles M., II, 4101 W. 57th, Shawnee Mission, Kan. 66205
Skillman, Mrs. Robert K., 10335 High Dr., Shawnee Missio Kan. 66206
Skinner, Mrs. John T., 824 Westover Rd. 64113
Slentz, Mrs. William A., 9835 Pembroke La., Shawnee Mission, Kan. 66206
Smith, Mrs. Arthur B., 8409 Wenonga Rd., Shawnee Mission, Kan. 66206
Smith, Mrs. Othello O., 5400 W. 83rd, Prairie Village, Ka 66206
Sneid, Mrs. Philip, 4201 W. 90th Terr., Shawnee Missio Kan. 66207
Spafford, Mrs. Allen L., 5552 Belinder Ave., Shawnee Mission, Kan. 66205
Spalding, Mrs. Wilbur B., Jr., 5400 Ward Pkwy. 64112
Spurny, Mrs. Otto M., 6400 Cherry 64131
Staab, Mrs. Gerald E., 3515 W. 64th, Shawnee Mission, Ka 66206
Stacey, Mr. Wallace R., 3407 Shady Bend Dr., Independen 64052
Staggs, Mrs. William A., 641 E. 45th 64110
Statland, Mrs. Harry, 648 E. 45th 64110
Statland, Mrs. Morris, 2911 W. 66th Terr., Shawnee Missio Kan. 66208
Steel, Mrs. Maxwell W., Jr., 12600 Ensley La., Shawnee Mission, Kan. 66209
Steffen, Mrs. L. F., 9606 Neiman Pl., Overland Park, Kan 66214
Stelmach, Mrs. W. Jack, 5252 Sunset Dr. 64112
Stern, Mrs. Thomas L., 1235 W. 62nd 64113
Stribling, Mrs. Thomas L., 3808 S. Union, Independence 64055
Szabados, Mrs. Ernest O., 1901 S. Leslie, Independence 64050
Thalblum, Mrs. Harvey, 8405 Ensley La., Shawnee Mission Kan. 66206
Thomas-Richards, Mrs. Jose, 6564 W. 49th, Mission, Kan 66202
Thomas, Mrs. Christopher Y., Jr., 5830 Mission Dr., Shawne Mission, Kan. 66208
Thompson, Mrs. C. Leslie, 801 W. 53rd Terr. 64112
Throne, Mrs. Benjamin, 7919 Sagamore Rd., Shawnee Mission, Kan. 66208
Throne, Mrs. Elias M., 10002 Mackey Circle, Overland Parl Kan. 66212
Tice, Mrs. Wayne K., 3626 Blue Jacket, Lee's Summit 64063
Tillema, Mrs. David A., 8015 El Monte, Shawnee Mission Kan. 66208
Titterington, Mrs. Frank W., 838 W. 58th 64113
Toubes, Mrs. Daniel, 9718 Wenonga, Leawood, Kan. 6620
Troeh, Mrs. Richard, 13000 Delaware Dr., Independence 64055
Trowbridge, Mrs. E. H., 101st Drive, Sun City, Ariz. 8537
Tuohy, Mrs. Gerald, 209 W. 125th Terr. 64145
Turano, Mrs. William, 7000 Lake Shore Dr., Raytown 6413
Tutera, Mrs. O. F., 1260 W. 63rd Terr. 64113
Twin, Mrs. Edward, 8402 Meadow La., Whispering Hills, Shawnee Mission, Kan. 66220
Underwood, Mrs. Dick H., 9828 Belinder, Shawnee Missior Kan. 66206
Van Biber, Mrs. James T., 3705 Northern Blvd., Independence 64052
Vaughn, Mrs. James W., 5509 W. 86th, Shawnee Missior Kan. 66207
Venegoni, Mrs. Robert L., 2409 W. 69th, Mission Hills, Kan. 66208
Vera, Mrs. Enrique, 9218 W. 82nd Terr., Shawnee Missior Kan. 66204
Victor, Mrs. Frank, 9639 Chadwick, Shawnee Mission, Kar 66206
Vidals, Mrs. V. G., 9509 W. 104th Terr., Overland Park, Kan 66212
Vilmer, Mrs. Charles E., 6209 W. 65th, Shawnee Mission Kan. 66202
Vincent, Mrs. Jack, 2003 W. 67th Terr., Shawnee Mission Kan. 66208
Vogel, Mrs. Arthur P., 2215 Drury La., Shawnee Mission Kan. 66208
Volk, Mrs. George E., 12618 Cherokee La., Shawnee Missior Kan. 66209
Voth, Mrs. Harold W., 5413 Neosho, Shawnee Mission, Kar 66205
Wade, Mrs. Frederick E., 1215 W. 68th Terr. 64113
Wagner, Mrs. Paul J., Greenwillow Farm, Rt. 1, Greenwoo 64034
Walker, Mrs. Orville C., Jr., 604 Partridge, Independence 64050

Wall, Mrs. Leonard A., 5011 Neosho Ave., Shawnee Mission, Kan. 66205
Waxman, Mrs. Herbert, 2012 W. 81st, Shawnee Mission, Kan. 66206
Weir, Mrs. Robert K., 10015 E. 36th, Independence 64052
Wells, Mrs. Donald E., I-18 Lake Lotowana, Rt. 4, Lee's Summit 64063
Wheeler, Mrs. John H., 5650 Mission Dr., Shawnee Mission, Kan. 66208
Whitaker, Mrs. James, 6450 Sagamore Rd., Shawnee Mission, Kan. 66208
White, Mrs. Charles H., 6518 Overhill Rd., Prairie Village, Kan. 66208
Whitman, Mrs. Doyle C., 6836 Cherokee La., Shawnee Mission, Kan. 66208
Whitmore, Mrs. J. Stewart, 5728 Windsor Dr., Shawnee Mission, Kan. 66205
Wicks, Mrs. Edwin O., 506 N.W. 43rd Terr. 64116
Wilber, Mrs. Robert D., 6056 Mission Dr., Shawnee Mission, Kan. 66208
Wilhelm, Mrs. Warren F., 3100 W. 67th, Shawnee Mission, Kan. 66208
Williams, Mrs. Frank, 5921 Ward Parkway 64113
Williams, Mrs. George P., 9413 Ralston 64138
Williams, Mrs. Joseph C., Jr., 2209 Arno Rd., Shawnee Mission, Kan. 66208
Willoughby, Mrs. James W., 420 N. Ridge, Liberty 64068
Willoughby, Mrs. Jean B., 1019 W. 69th Terr. 64113
Winer, Mrs. Herbert J., 2103 W. 69th Terr., Shawnee Mission, Kan. 66208
Winston, Mrs. Bernard H., 1006 W. 67th 64113
Wolf, Mrs. Jack, 6125 Morningside Dr. 64113
Woods, Mrs. S. Dwight, P.O. Box 609, Louisburg, Kan. 66053
Woods, Mrs. Walton C., 9004 E. 73rd 64133
Woodward, Mrs. William, 3610 S. Delaware, Independence 64055
Wortmann, Mrs. Robert F., 2819 W. 66th Terr., Shawnee Mission, Kan. 66208
Wright, Mrs. R. Paul, 9119 Riggs La., Shawnee Mission, Kan. 66212
Wu, Mrs. William, 6700 Troost 64131
Wurster, Mrs. Jerry B., 5218 W. 98th Terr., Shawnee Mission, Kan. 66207
Youll, Mrs. Donald V., 8711 Ensley La., Shawnee Mission, Kan. 66206
Youmans, Mrs. Ronald, 3901 W. 73rd, Shawnee Mission, Kan. 66208
Young, Mrs. James E., 9700 Overbrook Rd., Leawood, Kan. 66206
Young, Mrs. J. W., 5443 Mohawk, Shawnee Mission, Kan. 66205
Zahony, Mrs. Ivan, 4404 W 11th Terr., Shawnee Mission, Kan. 66211
Zeller, Mrs. Darrell, 4836 W. 76th, Shawnee Mission, Kan. 66208
Ziemianski, Mrs. Matthew C., 10823 W. 100th Pl., Shawnee Mission, Kan. 66214
Zoglin, Mrs. Nathan, 333 W. Meyer Blvd. 64113
Zoller, Mrs. David O., 74 Lake Shore Dr., Lake Quivera, Kan. 66106

ASPER COUNTY
Joplin 64801)

Adams, Mrs. Robert, 1302 Mississippi
Allen, Mrs. David O., Rt. 4, Box 85
Alquist, Mrs. Dale, 21st & Fairview, Baxter Springs, Kan. 66713
Al-Shathir, Mrs. Saad, 66 Briarwood Dr.
Arnold, Mrs. Jim, 2509 Indiana 64801
Barello, Mrs. Dan J., 1920 Laura La.
Barnett, Mrs. Norman, Box 271, Rt. 3
Bentlage, Mrs. Charles, Rt. 5, Box 137-O
Bhend, Mrs. David, 1212 Sheridan Dr.
Bladow, Mrs. Terrence, Rt. 5, Box 140-A
Brandon, Mrs. Frederick, 2609 E. 12th
Burch, Mrs. John E., 200 Medical Arts Bldg.
Burleigh, Mrs. Bruce, 601 Jaccard Pl.
Carnes, Mrs. Victor, 1418 Crestwood Dr.
Chase, Mrs. Ned, 2931 Indiana
Chellappa, Mrs. Dany, 2609 Michigan
Chesney, Mrs. George W., Jr., 2416 E. 12th 64801
Clark, Mrs. Frank, 4611 Seagraves Dr. 64801
Cohle, Mrs. Richard, 1609 Lilac La., Carthage 64836
Conde, Mrs. Gary, Rt. 7, Box 649
Crawford, Mrs. Archie L., 2931 Pearl Ave.
Crispell, Mrs. Lawrence, 911 Kensington Rd.
Curl, Mrs. Howard, 2031½ Pearl
Dandridge, Mrs. Kirk, 421 Sergeant
Dixon, Mrs. Herbert, Rt. 2, Box 221
Esch, Mrs. John, 2132 Carolina
Esther, Mrs. John, 612 Glenview
Ferguson, Mrs. Ralph, 420 E. 33rd
Ferguson, Mrs. Robert M., 2319 E. 10th
Fritsch, Mrs. Andrew, 2920 Pearl
Frogge, Mrs. James O., 2005 Laurel La.
Gardner, Mrs. Joe, 1002 N. Moffet
Gaston, Mrs. Samuel, 2720 Ohio
Grebe, Mrs. Keith, 2736 E. 15th
Grim, Mrs. Edward, 1402 Mississippi
Habermann, Mrs. James, 1324 Fairmont
Hallaba, Mrs. Moheb, Rt. 2, Box 197C
Hamilton, Mrs. Eugene, 1011 N. Jackson
Hilton, Mrs. Paul, 1612 Murphy Blvd.
Hwang, Mrs. Yung, 1309 E. Highland
Isbell, Mrs. C. H., 1046 S. Garrison, Carthage 64836
Kelly. Mrs. John, 2311 E. 10th
Koehler, Mrs. John W., 1001 Manitou
Maddox, Mrs. John, 1732 St. Louis
Majzoub, Mrs. Hish, 2802 Illinois
Manalo, Mrs. Gil B., 1607 S. Main, Carthage 64836
Mangalat, Mrs. Narayanan, 3116 Jefferson
Maneri, Mrs. John, 3922 Collegeview Dr.
Martin, Mrs. Clarence, 2419 E. 10th
McGonigle, Mrs. James, 1037 Campbell Pkwy.
McGonigle, Mrs. Michael, 4624 Hickory La.
McPike, Mrs. Lloyd H., 2217 Brownell
Mueller, Mrs. Adolph, 615 Hampton Pl.
Papp, Mrs. Sandor O., 3343 Pearl
Patterson, Mrs. Donald R., 210 Duquesne
Patterson, Mrs. Grover, 1727 River, Carthage 64836
Pottenger, Mrs. L. Ken, Rt. 2, Box 144, #28
Powell, Mrs. Robert, 1818 Galena, Galena, Kan. 66739
Pryor, Mrs. I. Joe, 2625 Wisconsin
Ray, Mrs. David J., Rt. 2, Box 144-32
Roberts, Mrs. Howard, Rt. 4, Box 63-J
Sabopathy, Mrs. S., 2930 Michigan
Schmidt, Mrs. Jack, 3702 W. 26th
Schoeberl, Mrs. C. B., 3111 E. 4th
Schulte, Mrs. Gregory A., 2515 E. 12th
Simons, Mrs. Jess, 2700 McClelland Blvd.
Singleton, Mrs. Marvin, Rt. 2, Box 138, Seneca 64865
Smith, Mrs. Dennis, 2122 Patterson
Smith, Mrs. Roland T., 1444 Crestwood
Smith, Mrs. Russell W., 315 Euclid, Carthage 64836
Stidman, Mrs. Fred, 4619 Wall
Straub, Mrs. David, Rt. 5, Box 140-O
Turfboer, Mrs. Robert, 2701 W. 32nd
Wieman, Mrs. Harry K., 536 N. Wall
Wilcoxson, Mrs. Robert, 1330 Valle Dr.
Wood, Mrs. George H., 530 E. Highland, Carthage 64836
Wooldridge, Mrs. Bart, 1435 Crestwood
Young, Mrs. C. C., 1730 Murphy Blvd.

JEFFERSON COUNTY

Albano, Mrs. Benjamin, 114 Mississippi Ave., Crystal City 63019
Blank, Mrs. Michael K., Star Rt. W., De Soto 63020
Bonifacio, Mrs. Andres, Rt. 6, Festus 63028
Conant, Mrs. James, Rt. 2, Summer Set Lake, De Soto 63020
Deles, Mrs. Vincente O., Brairwood, Crystal City 63019
Donnell, Mrs. Robert H., Glasgow Plattin Rd., Festus 63020
Judge, Mrs. Walter T., 1004 Taylor Ave., Crystal City 63019
Park, Mrs. Duk J., 1617 St. Mary's La., Festus 63028
Venzola, Mrs. Eufemio G., Rt. 5, Box 26, Festus 63028

JOHNSON COUNTY
(Warrensburg 64093)

Cooper, Mrs. R. Lee, 712 Laurel
Cooper, Mrs. Robert, II, 801 E. Gay
Damron, Mrs. O. H., 308 Jones
Folkner, Mrs. Albert L., Rt. 1
Hanna, Mrs. Hugh, Rt. 7, S. Mitchell
Johnson, Mrs. Charles S., 502 Hurricane Hill
Jones, Mrs. Keith D., 711 S. Holden
Lederer, Mrs. Charles M., 617 Clark
Maxson, Mrs. T. Reed, Arilen Acres
Ragland, Mrs. Jerry, Rt. 4
Reynolds, Mrs. Wayne, 604 N. Hwy 13 64093
Sicat, Mrs. Alfonso V., Rt. 4

LAFAYETTE-RAY COUNTIES

Brady, Mrs. Hugh, Concordia 64020
Cook, Mrs. Thomas B., Richmond 64085
Cope, Mrs. Joseph S., Lexington 64067
Crozier, Mrs. Frank, Sr., Rt. 2, Richmond 64085
Davault, Mrs. George, Rt. 4, Box A 22, Richmond 64805
Kelling, Mrs. Jordan, Waverly 64096
Kuangparichat, Mrs. Manoch, Rt. 1, Box 165-8, Lexington 64067
LaHue, Mrs. William, Sleepy Hollow Dr., Lexington 64067
Meyer, Mrs. Jerry, 302 Sunset Hill Dr., Concordia 64020
Pavlu, Mrs. Robert R., 14 W. 13th, Carrollton 64633
Riley, Mrs. Charles, Rt. 4, Box A13, Richmond 64085
Vajaranant, Mrs. Manit, Rt. 1, Box 164 64067
Ward, Mrs. Joe W., 1004 Francis, Lexington 64067

MILLER-MORGAN-MONITEAU COUNTIES

Buehler, Mrs. Carl T., 608 E. Newton, Eldon 65026
Fulks, Mrs. Richard B., California 65018
Gallagher, Mrs. Lionel M., California 65018
Gunn, Mrs. Jack, Versailles 65084
Hall, Mrs. C. Robert, 2 Country Pl., Versailles 65084
Lyle, Mrs. Ray, 209 S. Maple, Versailles 65084
Shelton, Mrs. E. O., 104 W. Newton, Eldon 65026
Washburn, Mrs. J. L., 108 W. Washington, Versailles 65084

PETTIS COUNTY
(Sedalia 65301)

Azan, Mrs. Kenneth, 2615 Plaza
Braverman, Mrs. Elliott M., Rt. 3, Walnut Hills
Brazos, Mrs. John, Rt. 6, Box 137
Campbell, Mrs. Albert J., 1500 W. 16th
Cole, Mrs. William R., Rt. 1, Smithton 65350
Edmonds, Mrs. Robert, 1601 W. Broadway
Edwards, Mrs. David R., 1619 S. Moniteau
Eldenburg, Mrs. Donald, Rt. 2
Erickson, Mrs. H. John, Rt . 3, Walnut Hills
Farkas, Mrs. J. Robert, Rt. 3, Box 287-B
Fisher, Mrs. Stanley O., 2200 S. Kentucky
Hopkins, Mrs. Thomas J., 1506 W. Broadway
Hopkins, Mrs. Thomas, S. 524 S. Grand
Horochowski, Mrs. Alex, 711 W. Broadway
Lamy, Mrs. John, 400½ Dal-Whi-Mo Ct.
Owens, Mrs. John H., 3003 Wing
Roberts, Mrs. Paul A., 110 W. Marshall, Sweet Springs 65351
Stauffacher, Mrs. Gordon C., 1313 W. Broadway
Stewart, Mrs. Robert H., 201 Driftwood Dr.
Stockwood, Mrs. Robert C., Rt. 3
Sull, Mrs. Won J., 2605 Plaza
Van Dyke, Mrs. Elmer, Rt. 4
Worley, Mrs. Charles A., 102 W. Ray, Sweet Springs 65351

ST. CHARLES-LINCOLN COUNTIES
(St. Charles 63301)

Altman, Mrs. Martin, 43 Meadowbrook, Ballwin 63011
Baird, Mrs. Keim L., 16 Warwick Ct.
Cabera, Mrs. Tom V., 10 Marquette, Lake St. Louis 63367
Carlson, Mrs. Arne, 89 Pebblebrook, Creve Coeur 63141
Carpenter, Mrs. James, Rt. 5, Box 42, O'Fallon 63366
Clay, Mrs. Calvin, 808 Oak
Connerford, Mrs. John F., 10 Rev Vista
Cova, Mrs. Reno R., 17 Westmoreland, St. Louis 63108
Crider, Mrs. Russell, 1875 S. River Rd.
Defilippo, Mrs. Emil A., 3727 Runnymede
Dietrich, Mrs. Russell, 6 Vicksburg Station
Duncan, Mrs. David, Rt. 3, Box 424, Wentzville 63385
Felder, Mrs. James, 701 Thompkins
Fleming, Mrs. Robert, 2 Indian Hills Ct.
Goldcamp, Mrs. John O., 10 Shawnee Dr.
Hammes, Mrs. R. E., 505 Concordia
Hassett, Mrs. Henry, 4400 Lindell Blvd., St. Louis 63108
Hetlage, Mrs. Louis P., 21 Burgundy Dr., Lake St. Louis 63367
Hurd, Mrs. James R., 417 Longbow Tr.
Irick, Mrs. Max, 918 Quince Dr.
Keller, Mrs. Robert, 712 Parr, Wentzville 63385
Keohane, Mrs. Mark, #7 Windbrush Creek E., Creve Coeur
Kingsbury, Mrs. Robert, 3631 Collingwood
Linsenmeyer, Mrs. Charles, 3715 Runnymede
Lissner, Mrs. Bart, 13 Royale Ct., Lake St. Louis 63367
Meyers, Mrs. Jerry, 308 Branchport, Chesterfield 63017
Miles, Mrs. Wayne, 14517 Debbenham La., Chesterfield 63017
Mhum, Mrs. H. Yale, Route 3, Box 105, Marthasville 63357
Muenster, Mrs. Vincent, 29 Shawnee Dr.
Perna, Mrs. Vincent P., 14 Rio Vista Dr.
Poggemeier, Mrs. William, 23 Shawnee
Rother, Mrs. Paul, #7 Elmwood Park
Roxas, Mrs. Generoso, 20 Angiers Ct., Lake St. Louis 63367
Ruggles, Mrs. James, 76 Boca Raton Ct., Chesterfield 63017
Schuetz, Mrs. Alfred, 904 Indian Hills
Sill, Mrs. William, 235 Shelburne
Stergen, Mrs. N. E., 5647 Bermuda, St. Louis 63121
Tejero, Mrs. Jonas, 4 Bellevine
Thiele, Mrs. Otto, 3100 W. Adams
Vart, Mrs. Gary, 2620 Park Ave.
Walsh, Mrs. Martin, #8 Mill Race Ct., St. Peters 63376
Wipfler, Mrs. Earl, 405 Duckett

ST. LOUIS METROPOLITAN

Abelardo, Mrs. M. L., 1015 Terracerock Cir., Manchester 63011
Alex, Mrs. Morris, 18 Crosswinds 63132
Alvarez, Mrs. Ulises, 635 Spring Meadows Dr., Ballwin 63011
Antoniou, Mrs. Charles, 13508 Clayton Rd. 63141
Aronson, Mrs. Abraham, 11 Conway La. 63124
Arnot, Mrs. John P., 28 Countryside La. 63131
Ayata, Mrs. Sedat, 41 Ladue Estates 63141
Ayvazian, Mrs. Vatche, #5 West Point La. 63131
Bailey, Mrs. Wm. Harold, 9157 E. Milton Ave., Overland 63114
Balster, Mrs. Vernon H., 10140 Sakura Dr. 63128
Barden, Mrs. Frank, 41 Beaver Dr. 63141
Bauer, Mrs. Robert, 11 Harneywold 63136
Benjamin, Mrs. Durand, 12567 Chardin Pl., Apt. 3 63128
Bergman, Mrs. Hugo F., 2920 Moniteau Dr. 63121
Bergman, Mrs. John F., 550 Bonhomme Woods Dr. 63132
Berwald, Mrs. David M., 725 Champlix La., Creve Coeur 63141

Berwald, Mrs. Irvin I., 747 Old Bonhomme Rd. 63132
Bohigian, Mrs. George, 21 Roclare La. 63131
Bolton, Mrs. Robert L., 42 Shady Valley Dr., Chesterfield 63107
Bowles, Mrs. Robert, 754 Gabriel Ct., Kirkwood 63122
Bradley, Mrs. F. R., 7404 Oxford Dr. 63105
Brennan, Mrs. George A., 10546 Hanford 63128
Brennen, Mrs. Robert A., 6030 Highfield 63109
Brodeur, Mrs. Armand E., 400 Bambury Way 63131
Brown, Mrs. Seymour, 2421 Baxton Way, Chesterfield 63017
Brown, Mrs. W. Sidney, 1106 N. Hanley Rd. 63130
Bruns, Mrs. Kenneth, 15046 Claymoor Court, Apt. 7, Chesterfield 63017
Budd, Mrs. John J., Jr., 501 Overhill Dr. 63130
Burroughs, Mrs. W. H., 7327 Pershing 63130
Burst, Mrs. Donald D., 61 Trent Dr. 63124
Cabral, Mrs. Galileu, 15244 Lochcrest Ct., Ballwin 63011
Cacioppo, Mrs. Joseph E., 1525 Hampton Hall Dr., Chesterfield 63017
Carney, Mrs. Joseph, 6625 Penrod 63139
Catanzaro, Mrs. R. E., 412 Tregaron Pl. 63131
Cherre, Mrs. Charles J., 10 Ridgetop 63117
Chinsky, Mrs. Murray, 7200 Colgate Ave., University City 63130
Ciapciak, Mrs. Stanley, 30 Log Cabin Dr. 63124
Codilla, Mrs. Sostenese G., 1005 Parkwatch Dr., Ballwin 63011
Costa, Mrs. Dominic, 10 Devondale 63131
Costrino, Mrs. Joseph A., 12567 Conway Rd., Creve Coeur 63141
Davidson, Mrs. Morris, 128 Frontenac Forrest 63131
Davis, Mrs. Edgar W., 36 Mansion Hills Dr., Ballwin 63011
Del Rosario, Mrs. Horacio D., 1984 Pick Fair Dr. 63141
Dennison, Mrs. Carl F., 52 Braircliff 63124
Dewald, Mrs. Paul A., 60 Conway La 63124
Diehr, Mrs. Maurice A., 1530 Bedford Forte, Apt. 14, Chesterfield 63017
Di Pasco, Mrs. Donald J., 51 Magnolia Dr. 63124
Dorton, Mrs. Robert, 8 Fordyce Manor 63131
Dumadag, Mrs. Virgilio P., 2280 Whitby Rd., Chesterfield 63017
Dyer, Mrs. Clyde P., 300 Hot Springs Rd., Apt. 147, Montecito, Calif. 93108
Edwards, Mrs. Joseph, 610 W. Polp Dr., Clayton 63105
Eidelman, Mrs. Jack, 8001 Watkins Dr. 63105
Eigel, Mrs. Edwin G., 10111 Hilltop Dr., Apt. B-D 63128
Feller, Mrs. Harold, 5834 Bermuda Rd. 63121
Figueroa, Mrs. Eliseo, 2448 Camberwell Ct. 63131
Finn, Mrs. M. E., 47 Portland Pl. 63108
Fitzgerald, Mrs. Leo, 7219 Cornell Ave. 63130
Fischer, Mrs. John, 18 Cricklewood Pl., Frontenac 63131
Fletes, Mrs. James W., 5601 Lindell Blvd., 63112
Forsman, Mrs. Waldo W., 4128 S. Lindbergh Blvd. 63127
Fox, Mrs. Lion J., 903 S. Warson Rd. 63124
Franklin, Mrs. Max, 585 Coeur De Royale, Apt. 401, Creve Coeur 63141
Franklin, Mrs. Ira J., 22 Ridgemoor, Clayton 63105
Fuchs, Mrs. George J., Rt. 2, Box 183, Barnett 65011
Gall, Mrs. Ira C., 8989 Moydalgan Rd. 63124
Gandlmayr, Mrs. J. M., 13600 Peacock Farm 63131
Gantner, Mrs. George E., 233 Woodbourne Dr. 63105
Gearhart, Mrs. Wilbur H., 14084 Deltona Dr., Chesterfield 63017
Glaser, Mrs. Martin J., 3550 Hawthorne Blvd. 63104
Glick, Mrs. Harry N., 15201 Olive Blvd., Apt. 461, Chesterfield 63017
Gomez, Mrs. Cesar A., 18 Portland Pl., Frontenac 63131
Goodman, Mrs. Nathaniel, 9 Scarsdale La., Richmond Heights 63117
Green, Mrs. William R., 10311 N. Sunset 63141
Gresick, Mrs. Robert, 11 Coach-N-Four 63131
Gunn, Mrs. Walter, 6742 Itaska 63109
Haddock, Mrs. James, 111 Firwood, Webster Groves 63119
Hallazgo, Mrs. Santiago Y., 14540 Coeur O'Alene Ct., Chesterfield 63017
Hantz, Mrs. Oscar, 12891 Castleton Ct. 63141
Hardy, Mrs. Guerdan, 9009 Green Ridge 63117
Hardy, Mrs. Patrick J., 14300 Ladue Rd., Chesterfield 63017
Harkins, Mrs. William, 7 Kingsbury Pl. 63112
Hawk, Mrs. Bray, 3534 Hawthorne 63104
Haynes, Mrs. Pugh, 8006 Gannon 63130
Henschel, Mrs. Eugene, 55 Broadview, Clayton 63105
Herzog, Mrs. G. M., 9 Wendover 63124
Hobbs, Mrs. John E., 25 Woodcrest Dr. 63124
Hogan, Mrs. Patrick, 9036 Laurel Crest 63126
Hollo, Mrs. Vencel W., 8 Country Estates 63131
Huck, Mrs. Richard, 11 Godwin La. 63124
Izirlian, Mrs. Grant, 13439 Mason Valley Ct. 63131
Jones, Mrs. James H., #1 Country Aire 63131
Jones, Mrs. Otey S., 2010 Longfellow 63104
Kabir, Mrs. M. A., 40 Lake Forrest 63117
Kamuran, Mrs. Ozgoncu, 332 Laduemont, Creve Coeur 63141
Karl, Mrs. Michael M., 14 Thorndell Dr. 63117
Kendig, Mrs. John, 841 Rolfe Dr. 63122
Kendis, Mrs. Joseph B., 19 Warson Terr. 63124
Kimelman, Mrs. Nathan, 21 Granada Way 63124
King, Mrs. E. E. III, 2915 Bellerive Dr., Normandy 63121
Klein, Mrs. Saul J., 11 Huntleigh Downs 63131
Kloecker, Mrs. Richard J., 1022 Hampton Park 63117
Kneal, Mrs. Ellsworth, 725 S. Skinner 63105
Knight, Mrs. Franklin P., 11465 Fairlane Dr. 63136
Knight, Mrs. William A., Jr., 12 Briar Cliff 63124
Korenblat, Mrs. Phillip, 11249 Tureen Dr., Creve Coeur 63141
Kountz, Mrs. William B., 2619 Gurney Ct. 63110
Krojanker, Mrs. Rolf J., 1060 Purdue 63130
Kuhlman, Mrs. Robert E., 12 Upper Barnes Rd. 63124
Laird, Mrs. John, 18 Jamestown Acres, Florissant 63034
Lansche, Mrs. W. Edward, 39 Muirfield La. 63141
Lembeck, Mrs. Joseph A., 4103 Flora Pl. 63110
Lerwick, Mrs. E. R., 40 Portland Pl. 63108
Lewin, Mrs. Wilbur Howard, 8 Ridgecreek Rd. 63141
Lewis, Mrs. J. Eugene, Jr., 7129 Kingsbury Ave. 63130
Linder, Mrs. Howard E., 15275 Denwoods Dr., Ballwin 63011
Liss, Mrs. Jay L., 22 Crestwood Dr., Clayton 63105
Lottes, Mrs. J. Otto, 1028 Winwood Dr. 63124
Luehrs, Mrs. Robert D., 14471 Bantry La., Apt. 2, Chesterfield 63017
Lund, Mrs. Herluf G., 58 Portland Dr. 63131
Luther, Mrs. George A., 177 Ladue Oaks Ct. 63141
Machek, Mrs. Otakar, 16 Carrswold 63105
MacNish, Mrs. James M., 229 Bompart 63119
Magness, Mrs. Guy N., 7727 Blackberry La., University City 63130
Malles, Mrs. A. Conrad, 68 Woodoaks Trail 63124
Mathae, Mrs. George H., 3167 S. Grand Blvd. 63118
Mayer, Mrs. Robert A., 2442 White Stable Rd., Town and Country 63131
McLean, Mrs. Royal C., 520 W. Jewel Ave., Kirkwood 63122
Meador, Mrs. James R., 10367 Oxford Hill Dr. 63141
Meadows, Mrs. Douglas, 12341 Boothbay Ct. 63141
Mendosa, Mrs. Lawrence E., 138 Ridgecrest Dr., Chesterfield 63017
Meneses, Mrs. Orlando G., 1857 Bopp Rd., Des Peres 63131
Merenda, Mrs. Sam J., 1215 Kings Glen Ct. 63131
Mezera, Mrs. Raymond A., 7345 Whitehaven Dr., Affton 63123
Michael, Mrs. Vernon, 45 Huntleigh Woods 63131
Middleton, Mrs. Jerry N., 23 Clermont La. 63124
Miles, Mrs. Paul W., 15 Ridge Creek Rd., Creve Coeur 63141
Miller, Mrs. Charles, Jr., 206 N. Fillmore Ave., Kirkwood 63122
Molden, Mrs. Charles A., 36 Bellerive Acres, Normandy 63121
Montes, Mrs. Arturo, 11542 Rosary 63138
Montgomery, Mrs. A. F., 18 Southcote 63144
Moore, Mrs. William E., 452-G Chapel Ridge Dr., Hazelwood 63042
Morfit, Mrs. John C., 7627 Wydown Blvd. 63105
Mowrey, Mrs. William D., 7071 Lindell Blvd. 63130
Mueller, Mrs. Robert J., 40 Huntleigh Woods 63131
Muether, Mrs. Raymond, 1509 Hedgeford Dr., Chesterfield 63017
Murphy, Mrs. John, 7245 Princeton Ave. 63130
Nakada, Mrs. James R., 2 Huntleigh Downs 63131
Neun, Mrs. William F., 5862 Delor 63109
Niesen, Mrs. Frank, 1304 Brynnwood 63124
Nye, Mrs. Robert, 4852 S. Broadway Blvd. 63111
Oppenheimer, Mrs. Henry E., 9444 Old Bonhomme Rd. 63132
Orenstein, Mrs. Joseph M., 417 Jackson Ave. N 63130
Ostapowicz, Mrs. Frank, 3 Hillvale Dr., Clayton 63105
Ott, Mrs. Harold J., 29 Bopp La. 63131
Ottolini, Mrs. James L., 14880 Sugarwood Terr., Chesterfield 63017
Peden, Mrs. Joseph C., Jr., 51 Fair Oaks 63124
Peeler, Mrs. J. D., 10000 Knoll Crest Ct. 63136
Pennoyer, Mrs. James, 117 Plant Ave., Webster Groves 63119
Perry, Mrs. William D., 2357 Broadmont Ct., Chesterfield 63017
Phillips, Mrs. Hanford, 215 Graybridge Rd. 63124
Powell, Mrs. John, 1819 Summerlake, Chesterfield 63017
Powers, Mrs. Pierce W., 4 Crestwood Dr. 63105
Probst, Mrs. Raymond E., 23 Godwin La. 63124
Pyne, Mrs. Herbert S., 5329 Mardel Ave. 63109
Raybuck, Mrs. H. E., Jr., 22 Rolling Rock Ct. 63124
Redington, Mrs. James C. Jr., 1 Tuscany Pk. 63105
Reiches, Mrs. Aaron J., 11 Brazilian Ct. 63124
Reiter, Mrs. Federico B., 12844 Somerton Ridge, Creve Coeur 63141
Rendleman, Mrs. George F., 2 Vista Brook 63124
Repp, Mrs. Theodore J. Jr., 81 Bellerive Acres 63121
Ries, Mrs. Douglas, #8 Portland Dr. 63131
Ritter, Mrs. Hubert A., 26 Briarcliff 63124
Roberts, Mrs. Harold K., 434 S. Hanley Rd., Clayton 63105
Robertson, Mrs. Frank G., 642 Forrest Ave., Webster Groves 63119
Rosell, Mrs. Louis V., 66 Conway Cove, Chesterfield 63017
Roufa, Mrs. Joseph, 12390 Montsouris Dr. 63141
Rubin, Mrs. Robert, 411 Tregaron Pl. 63131
Ruhling, Mrs. Rudy, 6 Webster Knolls 63119
Sanders, Mrs. Robert D., Four Mile Village, Santa Rosa Beach, Fla. 32459
Schattyn, Mrs. Martyn, 9 Huntleigh Downs 63131
Schlansky, Mrs. Seymour, 612 Fairways Cir. 63141
Schmidt, Mrs. Edwin H., 10240 Schuessler 63128
Schwartz, Mrs. Melvin M., 61 Lake Forrest, Richmond Heights 63117
Schwarz, Mrs. Luis, 35 Portland 63108
Schweiss, Mrs. John F., 1414 Westwind Dr. 63131
Seimers, Mrs. George, 242 Worthing Dr. 63119
Sexton, Mrs. Daniel L., 14 Crestwood Dr. 63105
Shaw, Mrs. Edward, 3105 Longfellow 63104
Shepherd, Mrs. Charles T., 10 Covington Meadows 631
Sherwin, Mrs. Charles S., 3971 Flora Pl. 63110
Simril, Mrs. Wayne A., 21 Somerset Downs 63124
Sisk, Mrs. James C., 146 Frontenac Forest 63131
Smith, Mrs. Benjamin F., 5 Fordyce Manor 63131
Speno, Mrs. Angelo A., 11815 Point Oak Dr. 63131
Staehle, Mrs. Melvin E., 7325 Ravinia Dr., Normandy 631
Steiner, Mrs. A. J., 8 Country Aire 63131
Strominger, Mrs. Donald B., 701 Yale Ave. 63130
Stroud, Mrs. C. Malone, 3736 Rock Hill Rd., Birmingham, 35223
Sudholt, Mrs. Alfred F., Jr., Box 87, Grover 63040
Sullivan, Mrs. Clement J., 7740 Mohawk Dr. 63105
Sutter, Mrs. Richard A., 7215 Greensway Ave., Universit City 63130
Sweet, Mrs. Herbert C., 3 St. James Ct. 63119
Thale, Mrs. Thomas, 351 Meadow Brook, Ballwin 63011
Tjoflat, Mrs. Oliver E., 665 S. Skinker Rd. 63105
Toon, Mrs. Thomas J., 2932 Cantebury Dr. 63121
Tremain, Mrs. Irl G., 810 N. Albany Ave., Bolivar 6561
Turner, Mrs. Timothy, 12135 Royal Valley 63141
Valach, Mrs. Frank J., 4 Nassau Circle, Creve Coeur 6314
Virant, Mrs. John A., 119 S. Spoede Rd. 63141
Vitale, Mrs. Nicholas S., 614 Coachlight La., Hazelwood 63042
Walker, Mrs. Harvey, Jr., 8142 Amherst Ave., University C 63130
Walther, Mrs. Roy A., Jr., 16094 Chesterfield Lakes Dr., Chesterfield 63017
Walton, Mrs. J. H., 106 Manlyn Dr., Kirkwood 63122
Werner, Mrs. William A., 6015 Childress Ave. 63109

SALINE COUNTY
(Marshall 65340)

Baik, Mrs. K. Young, 411 E. Mission
Butner, Mrs. Michael, Rt. 1, Nelson 65347
Havnes, Mrs. R. C., Big Bend Nursing Home, Slater 6534
Knipschild, Mrs. Bedford F., 505 N. Brunswick
McBurney, Mrs. C. Alex, 927 Hurt, Slater 65349
Papreck, Mrs. K. Thomas, 831 E. Eastwood
Raynor, Mrs. Richard C., Rt. 4
Reid, Mrs. James A., 310 E. Rosehill
Roehrs, Mrs. Marvin Emil, 756 E. Eastwood
Simmons, Mrs. Sterling P., Mar-Saline Manor

SOUTH CENTRAL

Cooper, Mrs. C. W., 238 Chestnut, Thayer 65574
Flowler, Mrs. M. L., 1302 W. 3rd, West Plains 65775
Langevin, Mrs. Jack, Rover Rt., Box 81A, West Plains 6577
Morgan, Mrs. Tom, Rt. 3, Box 600, West Plains 65775
Smith, Mrs. Rollin, 620 W. Main, West Plains 65775
Walker, Mrs. A. T., 414 S. 6th, Thayer 65574
Wiles, Mrs. Jack, 1212 W. Broadway 65775

MEMBERS-AT-LARGE

Allen, Mrs. S. Lloyd, 3809 N.W. 62nd Terr., Kansas City 64151
Appleberry, Mrs. C. H., 706 W. Main, Flat River 63691
Bare, Mrs. Edward, 1211 Main, Tarkio 64491
Bauman, Mrs. Henry C., 929 W. 3rd, Maryville 64468
Campbell, Mrs. James, Loch Forest, Macon 63552
Comeau, Mrs. Richard, Dexter Convalescent Manor, Dext 63841
Darnell, Mrs. Thomas F. B., 9A Lakewood Estates, Branso 65616
DeGenova, Mrs. Gerald H., 585 Cedar La., Ste. Genevie 63670
Eggleston, Mrs. Donald E., 410 N. Rutherford, Macon 6355
Ekern, Mrs. H. Peter, 626 Summit, Mexico 65265
Fischer, Mrs. Theodore, P.O. Box 146, Altenburg 63732
Fleming, Mrs. J. Will, Jr., 7 Urbandale, Moberly 65270
Frazier, Mrs. Robert, 510 Tannen, Sikeston 63801
Froelich, Mrs. R. W., 1345 W. Madison, Lebanon 65536
Huber, Mrs. L. E., 107 Brinkerhoff, Moberly 65270
King, Mrs. Richard, 501 S. 2nd, Clinton 64735
Kruse, Mrs. Carl R., 706 S. Dickerson, Palmyra 63461
Kwon, Mrs. Yongsoo, 6 Surrey Hill, Hannibal 63401
Magruder, Mrs. L. M., 810 W. Cherry, Nevada 64772
McDermott, Mrs. Alfred E., 1104 Reddick, Perryville 6377
O'Brien, Mrs. Harry F., 408 Harvard, Mexico 65265
Palmer, Mrs. Russell H., 706 S. Dickerson, Palmyra 6346
Roller, Mrs. Merrill, 1000 Country Club Dr., Box 768, Hannibal 63401
Scott, Mrs. Kenneth F., 421 S. 2nd, Clinton 64735
Stricker, Mrs. E. A., 501 Evergreen, St. James 65559
Torontow, Mrs. John, 823 N. Washington, Nevada 64772
Walterscheid, Mrs. J. H., 27 Settlers Tr., Hannibal 6340
Wetzel, Mrs. Gus S., II, Rt. 4, Clinton 64735
Wheeler, Mrs. Robert L., 1202 E. South St., Harrisonville 64701

1979-1980 Policy Manual of the Missouri State Medical Association

This manual shall be a guide for MSMA members to the stand taken by the House of Delegates of the Missouri State Medical Association on issues involving Association policy.

The manual will be updated and revised according to House actions. The date in parentheses following each policy statement denotes the year it was adopted by the House.

Abortion

n abortion should be considered illegal if perormed by anyone other than a licensed physician n a place other than a licensed hospital. (1970)

Acupuncture

he MSMA urges the Missouri State Board of egistration for the Healing Arts to utilize such egal and statutory powers as may be available to eclare that the principles apparently involved in he practice of acupunture and shiatsu, if found to e scientifically valid and medically beneficial ould fall under the definition of the practice of edicine. (1973)

Alcoholism — Adjunctive Treatment

he MSMA supports the use of the adjunctive eatment resources of Alcoholics Anonymous, l-Anon, Ala-Teen and the National Council of lcoholism local affiliate by physicians in treating atients. (1979)

Alcoholism — Pharmacy Liaison

he MSMA supports a closer cooperation beveen physicians and pharmacists in a public eduation program regarding the problem of abuse of egally prescribed drugs and alcohol. The profesonal education of physicians and pharmacists hould include courses in these areas. (1979)

Alcoholism — Public Education

uniform policy regarding alcohol and drug buse education in schools is supported. In-depth ducation should be provided to Driver Educaon classes regarding drug and alcohol abuse as elated to traffic safety. (1979)

Armed Services

he MSMA encourages the Department of Defense to take steps to attract physicians to serve in the Armed Forces Reserve. Physicians should be utilized according to their capabilities and training and compensated appropriately for their time. (1979)

Board of Healing Arts

The State Board of Healing Arts should be provided with a wide range of discipline powers including requiring errant doctors to seek counseling or additional education. Also, every state should be informed when any doctor has his license suspended, revoked or is placed on probation. (1976)

The MSMA opposes any legislation which would dilute the licensing power of the State Board of Registration for the Healing Arts to license those physicians of good ethical and moral character. (1975)

Certificate-of-Need

Any Certificate-of-Need law in Missouri should completely exempt private physicians and their offices from provisions of the legislation and contain a dollar limit of at least $500,000 before a Certificate is required in remodeling or constructing of health care facilities. (1976)

Chemotherapeutic Costs

The MSMA should sponsor appropriate legislation that would make mandatory the offering of insurance coverage for reimbursement of chemotherapeutic agents, particularly on an outpatient basis. (1977)

CME Accreditation

The MSMA supports accreditation of continuing medical education by state medical associations whose CME standards meet those of the AMA. The MSMA shall recognize the bylaws of the Liaison Committee on Continuing Medical Education only if they allow continuation of accreditation of CME by state medical associations which meet AMA accreditation standards. (1978)

Community Professional Directories

It is not unethical for a physician to authorize the listing of his name and practice in a directory for professional or lay use which is intended to list all physicians in the community on a uniform and non-discriminatory basis. The listing shall not include any self-aggrandizing statement or qualitative judgment regarding the physician's skills or competence. The *American Medical Directory* provides an example of the kind of information that may be properly listed in national as well as community directories for health service personnel. Likewise, specialities or specialty practices used in the *American Medical Directory* should set the pattern for specialty designations. (1975)

Confidentiality

The MSMA encourages the enactment of legislation which would fully protect the confidentiality of medical records and of professional or peer review activities which are based on review and evaluation of such records. (1978)

Cost Effectiveness

The MSMA encourages individual physicians to help moderate increases in medical care costs by avoiding over-utilization and by using appropriate restraints to keep fee increases more in line with the annual cost of living increases. The Association endorses the Voluntary Effort to restrain increases in hospital costs. (1978)

Death — Definition

A person shall be considered dead if in the announced opinion of a physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of spontaneous respiratory and circulatory functions. In the event that artificial means of support preclude a determination that these functions have ceased, a person shall be considered dead if in the announced opinion of a physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of spontaneous brain functions. Death shall have occurred at the time when the relevant functions ceased. (1976)

Drugs — Generic Prescribing

The MSMA opposes governmental interference into the practice of medicine through mandate generic prescribing of drugs. (1976)

Drugs — Use of Combination of

The Federal Food and Drug Administratio should carefully study the prescribing habits o physicians before discontinuing a combination o drugs packaged together. (1974)

Drunk Drivers

The MSMA agrees to cooperate with the Legislature or proper agencies to remedy the dangerou problem of drunk drivers. (1974)

Education — Patient

The MSMA adopts the following guidelines fo third party reimbursement for patient education

1. The goal of patient education programs shal be to improve health and the delivery of healt care services through cooperative efforts o informed patients and health professionals.
2. Patient education programs shall be provide under the guidance of an educational committee comprised of members of the health professions, and administration, and consumers
3. Patient education committees will be responsible for the establishment, maintenance, an evaluation of all patient education programs.
4. Patient education services shall consist o planned efforts, with stated goals and objectives, based upon identifiable needs of patients and the resources of the health professionals.
5. Patient education services shall be provide under the direction of a practicing physicia and a trained educator and must be appropriate to the immediate health needs of the patient.
6. Participation in such programs shall be by prescription of a practicing physician and shall b documented in the patient's chart. (1975)

Education — School Health

Factual, academically founded courses should b developed and implemented by the Missouri Department of Education to teach human physiolog and pathophysiology at the elementary and secondary levels of the school system. (1974)

County medical societies are urged to wor with local school districts to assist in providin comprehensive health education programs an the state colleges of Missouri are urged to prepar qualified health instructors trained to integrat ealth concepts into all the courses they teach. 1972)

Fireworks

he MSMA supports a ban on the sale of fireworks n Missouri. (1976)

Fluoridation

he MSMA, realizing the medical importance of atural occurring fluorine taken in proper concenration into the human body, recommends the dding of fluorine to all drinking water systems in issouri in the concentration of one part per milon. (1972)

Health Systems Agencies

ll physicians must be mindful of the threat to uality medical care posed by Health Systems gencies. Physicians should provide leadership rough active involvement in the area HSA. 977)

Home Health Care

he concept of home health care and visiting urses care as a proper and economical way to ring quality health care to Missouri citizens not equiring more expensive and acute care is faored by the Association. (1972)

Hospice

he MSMA supports legislation to encourage the stablishment of physician-directed hospice care. 978)

Hospital — Preadmission Certification

he MSMA will continue to oppose implementaon of hospital preadmission certification. (1974)

Insurance — Charge for Extra Claim Forms

hysicians should feel free to charge for the addional service of filing more than one insurance aim form, especially if a different claim form is equired rather than a photocopy of the original aim form. (1973)

Insurance — Maternity Coverage

he MSMA supports inclusion in all insurance olicies for those in childbearing years of a clause roviding complete maternity coverage.

In order to provide continuity of coverage, the ollowing eligibility period should be written into l insurance policies concerning benefits for bstetric care: "A pregnancy which begins while e insurance is in force should be covered until the termination of the puerperium and until the newborn infant is discharged from the hospital to home care." (1974)

Insurance — Psychiatric Illnesses

The MSMA recommends that the State Commissioner on Insurance requires that all health and accident insurance policies sold in Missouri provide coverage for psychiatric illnesses equivalent to benefits for other medical and physical illnesses. (1978)

Laboratory — Collecting Fee

The MSMA supports payment under Medicaid to the physician for his service in collecting a specimen used for tests performed in an outside laboratory. (1977)

Licensing — Felon

As a general rule, the MSMA opposes the granting of a license to practice medicine to any physician who has been convicted of a felony. (1973)

Licensing — FMGs

The MSMA endorses the policy of accepting the "Fifth Pathway" for physician licensure in Missouri. (1975)

Licensure — Federal

The MSMA opposes any moves to require Federal licensure of health manpower. (1976)

Malpractice — Countersuits

Any Missouri physician found not to be negligent in a malpractice suit shall have the assistance of the MSMA in determining if there exists a reasonable basis for the physician to commence an action for malicious prosecution arising out of such case. (1976)

Medicaid Program

The MSMA no longer endorses the Title XIX Medicaid Program because of the unreasonably low level of reimbursement for physicians' services. (1978)

Medical Examiner System

The establishment of the county medical examiner system as a replacement for the county coroner system is strongly recommended. (1971)

Motorcycle Head Gear

The MSMA urges all motorcyclists to wear protective head gear (helmets) to prevent death and disability. (1977)

National Health Insurance

Any system of national health insurance must be designed with the consultation and aid of practicing physicians with the welfare of the patient as the guiding principle. A mechanism should be provided so the patient realizes the value of medical services to the point of real participation in the payment for those services. (1974)

The MSMA endorses the American Medical Association's bill as the national health insurance plan best suited to maintaining the high quality of American Medicine. (1976)

Nurse Practitioners

The MSMA supports the doctrine that physicians retain control of medical care and will challenge any person who is practicing medicine without a license, in the courts of law if necessary. (1978)

Optometrists — Drugs

The Association opposes the expansion of the Missouri Optometric Act which would allow the use of drugs in the practice of optometry. (1977)

Osteopaths — Association With

Medical doctors may consult or associate with Doctors of Osteopathy and participate in post-graduate education specifically designed for their needs. (1965)

Osteopaths — Membership

Both local and state medical societies may accept for full membership osteopathic physicians who are licensed to practice medicine in Missouri. (1970)

Physician's Assistants

The MSMA opposes state licensure or certification of additional health care personnel because there is no reason to accept a second class (second level) of medicine. (1979)

Primary Medical Care

Primary medical care shall be defined as only that care given by a licensed graduate of a medical or osteopathic school. (1977)

PSRO

The MSMA recommends a two-year trial period for PSRO in government-owned and operated hospitals before the law is applied to the private sector. A report on the benefits derived and the problems encountered would be made following the trial period. (1975)

If the Department of Health, Education and Welfare fails to return control of PSRO to the local level, the MSMA will promote non-participation by physicians, take appropriate legal action and, if these actions are unsuccessful, will work for the repeal of Public Law 92-603. (1975)

Seat Belts

The MSMA favors passage of state laws requiring use of seat belts in motor vehicles. (1974)

Second Opinions in Surgery

The MSMA, while realizing the value of consultation, opposes the concept of mandatory second opinions and supports the position that when second or more opinions are mandated by any party that this party is responsible for any consultation fee and the choice of consultant is the responsibility of the patient and/or the attending physician. (1978)

Unpaid Accounts — Interest

It is not in the best interest of the public or the profession to charge interest on an unpaid bill or note for professional services not paid within a prescribed period of time nor is it proper to charge a patient a flat collection fee if it becomes necessary to refer the account to an agency for collection.

It is not improper, however, for a physician to add a service charge, equal to the actual cost of rebilling, on accounts not paid within a reasonable time. Patients must be notified in advance about the existence of this practice. (1975)

Utilization Review — Participation

The MSMA supports the right of individual physicians voluntarily to elect not to participate in governmental review programs which they believe conflict with the principles of good medical practice when they have no contractual or ethical obligation to such program. (1976)

Utilization Review — Reimbursement

In those hospitals which conduct utilization review of any inpatient care, compensation of physicians for such review is a legitimate expense. The cost of such review should be included in hospital rates and reimbursable costs regardless of the source of payment. (1976)

Missouri Voluntary Health Agencies and Organizations

In some instances, patients of MSMA members are eligible to receive assistance from various Voluntary Health Organizations in the state.

Assistance may be in the form of free or subsidized special equipment, rehabilitation training, counseling, specialized care and information and many other areas.

In an effort to assist MSMA members in attaining assistance for their patients, the following list of Voluntary Health Organizations has been compiled. In some cases, a statewide organization is listed. In instances in which an organization is limited to a certain portion of the state, several organizations may be listed under one heading.

This list will be expanded and updated annually.

RTHRITIS

rthritis Foundation, Eastern Missouri Chapter
317 N. 11th, Suite 1117, St. Louis 63101
(314) 421-3550

rthritis Foundation, Greater Kansas City-Western Missouri Chapter
8900 State Line, Suite 404, Leavenworth, Kan. 66206
(913) 649-8820

1. Literature for arthritis patients.
2. Public and professional education programs.
3. Newsletter.
4. Patient Clubs.

thritis Institute
2727 Main, Kansas City 64108
(816) 221-5383

1. Literature for arthritis patients
2. Public and professional education programs.
3. Newsletter.

IRTH DEFECTS

ational Foundation March of Dimes
P.O. Box 1403, Columbia 65201
(314) 449-0573

1. Perinatal seminars for physicians and nurses held three times per month across the state.
2. Perinatal reprint series, articles related to the improvement of the outcome of pregnancy.
3. Limited patient aid support on chapter level.
4. Educational materials and audio-visuals for distribution through hospitals, clinics and offices to community and professionals.
5. Computer information service for providing physicians with diagnostic information.

ANCER

nerican Cancer Society, Missouri Division, Inc.
P.O. Box 1066, 715 Jefferson, Jefferson City 65102
(314) 636-3195

1. Trained volunteer visitation of mastectomies, ostomy patients and laryngectomies (with attending surgeon's permission).
2. Free loan of hospital beds, wheelchairs, commodes for home use.
3. Non-sterile cancer dressings.
4. Limited transportation services to and from treatment centers.
5. Limited assistance in the purchase of ostomy supplies.
6. Limited payment for pain medication (narcotics) for cancer patients.
7. Educational materials and audiovisuals on cancer prevention, diagnosis and treatment for public and health professionals.
8. Seminars for health professionals to update their knowledge and role in cancer prevention, diagnosis and treatment.

CREBRAL PALSY

United Cerebral Palsy Association of Missouri, Inc.
P.O. Box 611, Columbia 65201
(314) 449-2934

Extends services to disabled persons:

1. Developmental training.
2. Diagnosis and evaluation at 27 cerebral palsy centers.
3. Family and interpersonal counseling.
4. Preschool education.
5. Communication skills.
6. Adult day care.
7. Recreation and social group skill.

CRIPPLED CHILDREN

Easter Seal Society for Crippled Children and Adults of Missouri
8124 Delmar Blvd., St. Louis 63130
(314) 862-3000

1. Coordinates provision of services to physically handicapped through Regional Offices.
2. Information and Counseling on employment of resources.
3. Variety of services including equipment and appliances, preschool programs, camping and recreation, in some areas.
4. Financial assistance for purchase of equipment and therapy on casework basis.

Cystic Fibrosis

Cystic Fibrosis Foundation, Gateway Chapter
7730 Carondelet, St. Louis 63105

Cystic Fibrosis Foundation, Heart of America Chapter
7920 Ward Parkway, Room 206, Kansas City 64114
(816) 363-5636

1. Sweat testing and evaluation of Cystic Fibrosis Centers located in St. Louis, Kansas City and Columbia.
2. Assistance for drugs, laboratory work, x-rays, inhalation equipment and some hospitalization.

Diabetes

American Diabetes Association, Heart of America Affiliate
616 East 63rd, Kansas City 64110
(816) 361-3361

American Diabetes Association, Greater St. Louis Affiliate
3839 Lindell Blvd., St. Louis 63108
(314) 533-4143

American Diabetes Association, Missouri Regional Affiliate
Box 11, Columbia 65201
(314) 443-8611

1. Professional seminar for new treatment information for physicians.
2. Classes for outpatients.
3. Literature provided by drug companies and American Diabetes Association.
4. Summer camp for diabetic youth.
5. Cookbooks for sale.

Epilepsy

Missouri Epilepsy Federation
2337 S. Kingshighway, St. Louis 63110
(314) 771-1212

Greater Kansas City Epilepsy League
4049 Pennsylvania, Suite 301, Kansas City 64111
(816) 531-1247

1. Discount drug program makes anti-convulsants available at cost.
2. Medical identification bracelets and necklaces.
3. Counseling program including individual, family, vocational and referral to other resources.
4. Life insurance.

Heart

American Heart Association, Missouri Affiliate, Inc.
601 E. Broadway, Columbia 65201
(314) 442-3193

1. Sponsor for medical research.
2. Sponsor educational programs on cardiovascular disease for all professionals.
3. Sponsor educational programs for public.
4. Assist in development of community service programs.
5. Referral for financial assistance or special services.

Hemophilia

Bi-State Hemophilia Association
3109 S. Grand, St. Louis 63118
(314) 771-6080

1. Free summer camp for hemophiliac children.
2. Purchase of medical supplies.
3. Loan service for whirlpool baths and crutches.
4. Sponsor hemophilia clinic at Cardinal Glennon Hospital.

Kidney

Kidney Foundation of Eastern Missouri and Metro East
7 North Brentwood Blvd., St. Louis 63105
(314) 863-5858

Kidney Foundation of Greater Kansas and Western Missouri
3600 Broadway, Suite 25, Kansas City, Mo. 64111
(816) 531-3760

1. Assist in providing dialysis treatment.
2. Source for referral for information.
3. Education of emergency personnel on use of artificial kidney machine.
4. Drug bank.
5. Professional Education.

Lung

American Lung Association of Eastern Missouri
411 North 7th, St. Louis 63101
(314) 241-1554

American Lung Association of Western Missouri
2007 Broadway, Kansas City 64108
(816) 842-5242

1. Health education materials and services aimed at prevention of lung disease.
2. Publications on treatment of respiratory diseases.
3. Assistance to indigent patients for payment for diagnostic x-rays.
4. Transportation to chest clinic or hospital paid for qualified persons.

Multiple Sclerosis

Multiple Sclerosis Society, Greater Kansas City Area Chapter
6501 Johnson Dr., Shawnee Mission, Kan. 66202
(913) 432-3926

Multiple Sclerosis Society, Mid-Mo Chapter
802 East Broadway, P.O. Box 1071, Columbia 65201

1. Weekly MS clinic at Kansas University Medical Center.
2. Patient equipment pool (purchase and loan).
3. Counseling.
4. Prevention dental clinic at University of Missouri-Kansas City weekly.
5. Home care course for family education.

6. Sexual counseling.
7. Referral to community resources.
8. Transportation.

IUSCULAR DYSTROPHY

Iuscular Dystrophy Association of America
308 W. Commercial, Springfield 65803
(417) 866-5117

Iuscular Dystrophy Association, Inc., Missouri Valley Chapter
3947 State Line, Kansas City 64111
(816) 931-7750

Iuscular Dystrophy Association
Central Missouri Chapter
811 Cherry, Room 311, Columbia, Missouri 65201
(314) 443-6013

Iuscular Dystrophy Association, Inc., Mississippi Valley Chapter
1023 S. Big Bend Blvd., St. Louis 63117
(314) 644-2828

1. Free diagnostic testing for 37 neuromuscular disorders.
2. Payment for orthopedic appliances.
3. Payment for limited amount of physical therapy.
4. Payment for influenza inoculations.
5. Transportation assistance.
6. Free services supplied at outpatient clinics.
7. Genetic counseling.
8. Professional education.

YASTHENIA GRAVIS

yasthenia Gravis Foundation, Inc., Greater Kansas City Chapter
4949 Rockhill Rd., Kansas City 64110
(816) 276-8310

1. Outpatient clinic on referral from patient's physician for confirmation of diagnosis, consultation or patient maintenance.
2. Myasthenia gravis drug bank.
3. Professional and patient educational materials.
4. Free physician manual and nursing manual.
5. Professional educational seminar: Film and speaker provided.

ROWTH DISORDERS

uman Growth Foundation, St. Louis Chapter
Box 9959, Kirkwood 63122
(314) 429-6893

1. Counseling for families about growth disturbances.
2. Referral source for information regarding financial assistance and growth problems.
3. Assists National Pituitary Agency in collection of human pituitary glands.

RED CROSS

American Red Cross, St. Louis Bi-State Chapter
4050 Lindell Blvd.
St. Louis 63108
(314) 658-2000

American Red Cross, Greater Kansas City Chapter
3521 Broadway
Kansas City 64111
(816) 756-2365

1. Offers a number of courses to lay people, including "Preparation for Parenthood," "Multiple Sclerosis Home Care Course," "First Aid," "Cardiopulmonary Resuscitation" and "Health in the Home."
2. Vital Signs Module I and II provide a means of teaching lay persons to measure their own temperature, pulse, respiration rate and blood pressure.

RETARDED CITIZENS

Missouri Association for Retarded Citizens
230 W. Dunklin, Jefferson City 65101
(314) 634-2220

1. Clearinghouse for information on mental retardation.
2. Referral services.
3. Professional and public information and consultation available.
4. Day care centers, recreational programs and parent counseling.

SUDDEN INFANT DEATH SYNDROME

St. Louis Sudden Infant Death (SIDS) Project
607 N. Grand, Suite 725, St. Louis 63132
(314) 531-4100

1. Provides and coordinates free support services, including information and counseling, to families experiencing the death of an infant due to SIDS.
2. Distributes SIDS educational materials.
3. Provides education and training to health professionals and first responders to the death of an infant (police, firemen, ambulance paramedics, etc.).
4. Public information and community education.
5. Referrals to community resources.
6. Parent/peer counseling.
7. Assists in developing statewide support services for SIDS families.

Philadelphia Library
19 South 22nd St.
Philadelphia, PA 19103

MISSOURI STATE MEDICAL ASSOCIATION
UNITED WE STAND DIVIDED WE FALL
SALUS POPULI SUPREMA LEX ESTO
MDCCCXX

Missouri Medicine

MDS

Vol. 76, No. 9 (ISSN 0026-6620) September, 1979

Special!

What Is Right With American Medicine

by
Carlos Pestana, M.D.
San Antonio, Texas

Diagnosis and Treatment of Serous Otitis Media

Acoustic Tumors and Other Cerebellopontine Angle Lesions

Missouri Medicine In Review

Orbital Blowout Fracture Due to a Diving Accident

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
OCT 1 - 1979

MISSOURI STATE MEDICAL ASSOCIATION

Contents • Page 465

In unity there is strength. That's why there's Momedico.

Nobody knows a doctor's needs better than a doctor. That includes your need for malpractice insurance. But shouldn't you be looking for more than just coverage?

That's why there's Momedico. Formed by Missouri doctors, for the protection of Missouri doctors, Momedico is the only professional liability insurance company backed by the Missouri State Medical Association.

With Momedico, you get the needed coverage at a competitive price. You also get a voice in the company's policies. You become part of a doctor-owned, doctor-directed organization that has one goal: your welfare. There are no earnings to retain for stockholders' benefit, no disappearing acts in the middle of a crisis.

We're doctors working together. More than 80,000 physicians in 19 similar companies in America are protected like this. And it works.

Find out the advantages of having your malpractice insurance with Momedico. Just mail the coupon below and we'll tell you the whole story.

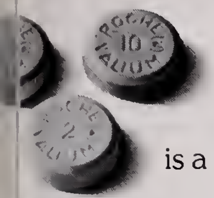
☑ Yes. I would like to know more about professional liability insurance with Momedico.
☐ Have your agent call me. (Best time to call____________)
☐ Send me more information, please

MOMEDICO®
Better Protection. Together.
Sponsored by the Missouri State Medical Association.

NAME
ADDRESS
CITY/RFD
ZIP PHONE #

Mail to: Momedico, 100 North Broadway, St. Louis, MO 63102 or call Collect (314) 241-4774

A character all its own.



Valium (diazepam/Roche) is a benzodiazepine with a character all its own. Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® Ⓘⓥ
diazepam/Roche
2-mg, 5-mg, 10-mg scored tablets
a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.
Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).
Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Rae W. Froelich, M.D., Lebanon
George Bohigian, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
Richard H. Fallon, M.D., St. Louis
James M. Stokes, M.D., St. Louis
J. Otto Lottes, M.D., St. Louis
Theodore L. Paletta, M.D., St. Louis
Frederick D. Peterson, M.D., St. Louis
Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
Vice-Councilor, Paul H. Rother, M.D., St. Charles
5th District, H. Peter Ekern, M.D., Mexico
Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
Donald McIntosh, M.D., Kansas City
Ronald A. Youmans, M.D., Kansas City
Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
Marvin A. Singleton, M.D., Joplin
Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, Wilfred E. Wooldridge, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

ontents for September, 1979

cientific Articles

iagnosis and Treatment of Serous Otitis Media; J. Regan Thomas, M.D. and J. Brad Allard, M.C.D. 479

coustic Tumors and Other Cerebellopontine Angle Lesions, *A Two-Year Surgical Experience;* Charles M. Luetje, M.D. and C. Keith Whitaker, M.D. 482

rbital Blowout Fracture Due to a Diving Accident, *Case Report;* Harry Wright, M.D., Stephen F. Bowen, Jr., M.D. and Stephan S. Morgan, M.D. 487

assive Hepatic Necrosis Following Selective Arterial Embolization, *Case Report;* Joseph C. Stothert, Jr., M.D., Theodore J. Dubuque, Jr., M.D. and Somnuk Shrivisal, M.D. 489

pdate on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas, *Case Reports;* Jamil A. Fayez, M.D., James R. Sowers, M.D., Susan Blanchard, Betty Y. Finnie and Terry Morris, M.D. 492

pecial Article

hat Is Right With American Medicine; Carlos Pestana, M.D., Ph.D. 473

ews and Features

SMA News Round-Up . . . . . Insert (466-467)

hoto-Comment by James W. Clawson, M.D. 468

ditor's Corner 469

resident's Message 499

SMA Auxiliary 500

ontinuing Education Coming Events . . . 501

ews From the Medical Schools 503

Brief 505

ew Members 507

Memoriam 508

dex to Advertisers 509

issouri Medicine In Review 510

Missouri Medicine

THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D., Columbia
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
F. Thomas Ott, M.D., St. Louis
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiation Therapy
MacDonald B. Logie, M.D., St. Louis
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
  General
    Charles H. Bentlage, M.D., Joplin
    Richard O. Craig, M.D., St. Joseph
  Orthopedic
    Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102.

Copyright 1979 by Missouri State Medical Association. All rights reserved.

Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

ALDORIL®
ALDORIL®
ALDORIL®
DORIL®
containing methyldopa and hydrochlorothiazide

TABLETS
ALDORIL®-25
containing 250 mg ALDOMET® (Methyldopa, MSD)
and 25 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL®-15
containing 250 mg ALDOMET® (Methyldopa, MSD)
and 15 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL® D30
containing 500 mg ALDOMET® (Methyldopa, MSD)
and 30 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL® D50
containing 500 mg ALDOMET® (Methyldopa, MSD)
and 50 mg HydroDIURIL® (Hydrochlorothiazide MSD)

Merck Sharp & Dohme, Division of
Merck & Co., Inc., West Point, PA 19486

MSD
MERCK
SHARP&
DOHME

Copyright © 1979 by Merck & Co., Inc

J9AR13

Quinamm™

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS: For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

CONTRAINDICATIONS: Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency. Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

PRECAUTIONS: Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication.
Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

ADVERSE REACTIONS: Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

DOSAGE AND ADMINISTRATION:
1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

U.S. Patent 2,985 558

Merrell
MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to:
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

8 3305 (Y371A)

for Knotts in the night

Quinamm™

each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

specific therapy for painful night leg cramps

Nocturnal recumbency leg muscle cramping is frequently an unwelcome bedfellow for many patients—especially those with arthritis, diabetes or peripheral vascular disease . . . consider Quinamm . . . simple, convenient dosage—usually just one tablet at bedtime . . . can provide restful, welcome sleep without night leg cramps.

See opposite page for prescribing information.

COMPATIBILITY

Does it influence your choice of a peripheral/cerebral vasodilator*?

- Vasodilan—compatible with coexisting diseases
- Vasodilan—compatible with concomitant therapy
- Vasodilan—compatible with your total regimen for vascular insufficiency

*Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows.

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficienc
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg and 20 mg Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to o use when administered in recommended doses Should not be given immediat postpartum or in the presence of arterial bleeding

Parenteral administration is not recommended in the presence of hypotension tachycardia

Intravenous administration should not be given because of increased likelihoo of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued

Although available evidence suggests a temporal association of these reaction with isoxsuprine, a causal relationship can be neither confirmed nor refuted

Administration of single dose of 10 mg intramuscularly may result in hypotension and tachycardia These symptoms are more pronounced in higher doses For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

VASODILAN®

(ISOXSUPRINE HCl)

20-mg tablets

MeadJohnson PHARMACEUTICAL DIVISION

© 1978 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 U.S.A. MJL7-426

MSMA NEWS ROUND-UP

September 1979

Dr. Louis P. Hetlage dies

Dr. Louis P. Hetlage, vice-chairman of the MSMA Council, died in St. Louis on August 9, 1979.

Dr. Hetlage, who had a private practice in Troy since 1954, received his M.D. degree from Washington University School of Medicine and did his surgical residency at Barnes and St. Luke's Hospitals in St. Louis.

He was a member of the American Medical Association, the American College of Abdominal Surgeons, the American Geriatric Society and served on the Board of Directors of the Missouri Medical Political Action Committee.

A dedicated member of organized medicine, Dr. Hetlage served two terms as president of the St. Charles-Lincoln County Medical Society from 1968-1970. He was elected Fourth District Councilor in 1971 and served until his death. Dr. Hetlage was elected vice-chairman of the MSMA Council in April, 1979.

He was the author of legislation setting up Life Line, a computer organized organ donation system that was accepted for sponsorship by the AMA in 1978. He was a founder and on the board of directors of the St. Louis Metropolitan Health Plan.

Dr. Louis P. Hetlage

Dr. Hetlage was also active in community affairs, serving as a Troy alderman for two terms, past president of both the Troy Chamber of Commerce and the Troy Rotary Club. He was a past chairman of the Lincoln County chapter of the American Red Cross for two years.

He is survived by his wife, Marilyn, four children and two step-children.

Council approves a reapportionment plan

During the August meeting in Columbia, members of the MSMA Council asked that a memorial resolution be prepared for the Interim Session to honor Dr. Louis Hetlage, Fourth District Councilor and Vice Chairman, who died August 9, 1979.

Dr. Paul H. Rother, St. Charles, is the new Councilor from the Fourth District. The Council elected Dr. H. Peter Ekern as the new Vice Chairman of the Council.

Also at the meeting, the Council approved a resolution allowing exchange or transfer of subordinated notes funding MOMEDICO to accommodate changes of personnel in group practice.

Regarding reapportionment of the MSMA House of Delegates, the Council approved a plan to submit to the House at Interim Session. This plan calls for maintaining existing House representation from outstate Missouri while allowing additional delegates to Jackson and St. Louis Metropolitan Societies in order that those societies will have a proportional number of delegates to equal the percentage of their membership in the MSMA. Membership figures from December 31, 1978, indicate that the House would be composed of 435 delegates.

In other actions, the Council:

● Approved a study to be conducted by the Commission on Continuing Education on additional paramedical personnel licensure. Dr. Robert Ramsey, St. Louis, was appointed to the Ad Hoc Committee on Continuing Medical Education.

● Voted to recommend Dr. George Ladyman for appointment to the AMA Committee on CME. It was also decided that Drs. William Bradshaw and William Allen were eminently qualified to serve on this committee and that their CV's would be sent along with Dr. Ladyman's.

● Agreed to prepare a resolution for submission to the AMA calling for the establishment of an incoming WATS line.

● Recommended that Mrs. Keith D. Jones of Warrensburg be nominated to the AMPAC Board of Directors and that a letter of recommendation from MSMA and MMPAC be written to the AMA Auxiliary and AMA Board of Trustees.

● Approved giving the stipend received from the MSMA-approved collection agency in lieu of advertising, grants and exhibits to the Missouri State Medical Foundation.

● Approved MSMA support of a Federal grant for the Missouri Health Data Corporation. Dr. James Palen of Cape Girardeau was recently appointed to the Corporation's Board of Directors by MSMA President Dr. Andrew McCanse.

● Approved a grant of $499 to the American Association of Medical Society Executives.

● The Council is writing to the State Board of Registration for the Healing Arts in response to their request for input into defining the practice of medicine.

● Referred to the Commission on Interspecialty Medicine a resolution concerning application of podiatrists for hospital privileges.

● Instructed the Commission on Medical Economics to discuss problems with the Medicaid appropriations at their next meeting and report back to the Council.

(continued on next page)

Council (continued)

- Referred the issue of a single fee for a single service back to the Commission on Medical Economics for further study and report to the House in the form of a resolution at the 1979 Interim Session.
- Because the Commission on Medical Economics suggested that the MSMA consider re-opening discussion with the Division of Family Services regarding a deferred compensation program, the Council instructed staff to communicate with First Variable Life in Arkansas concerning their deferred compensation plan.
- Appointed Drs. Irving Clark, Chairman, Donald McIntosh and Ronald Youmans to serve on the Committee on Arrangements for the 1980 Annual Session.
- Approved the recommendations of the Commission on Public Affairs Ad Hoc Committee.
- As a result of a meeting with officials from the State Division of Credit Unions, the Council decided not to form a statewide Credit Union and to investigate local options.
- Agreed that letters of support for the Statewide PSR Councils should be written to Missouri's Congressmen.
- Approved the report and recommendations of the Commission on Medical-Legal Affairs.

Governor appoints agency to review expenditures by health care facilities

In August, Governor Joseph Teasdale designated the State Health Planning and Development Agency (SHPDA) to administer a review of capital expenditures by health care facilities under Public Law 92-603 (commonly known as the 1122 program).

Under this program, the Agency reviews and approves or denies any capital expenditure proposed by a health care facility which would:

1) exceed $100,000, or
2) change the bed capacity of the facility, or
3) substantially change the services offered by the facility.

If the SHPDA does not approve a project proposed by a health care facility, then the Secretary of the Department of Health, Education and Welfare will refuse federal payments under Medicare, Medicaid, and Maternal and Child Health related to such capital expenditures.

The SHPDA has the responsibility for administering the review program and submitting findings and recommendations to the Secretary of DHEW. The Health Systems Agencies will perform reviews based on the needs of their region. SHPDA will use the comments of the HSA's and other appropriate agencies as well as their own review in determining its formal findings.

An institution which receives a negative finding from SHPDA may request a hearing, which will be held by the Administrative Hearing Commission, Department of Consumer Affairs, Regulation, and Licensing.

MOMEDICO report shows progress

A recent progress report on MOMEDICO, the Missouri physician-owned professional liability insurance company, shows the company is financially sound and gaining the support of more and more physicians. A primary reason for this progress is MOMEDICO's competitive rate structure.

As of July 31, 1979, MOMEDICO had 1,097 policy holders, 894 of these individual physicians and 203 partnerships/corporations. The premiums totaled $2,358,845 and subordinated notes sold equaled $1,854,600.

New Interim Session schedule set

Component medical society delegates and alternates were recently sent their official notification of the schedule for the fourth Interim Session of the Missouri State Medical Association.

All MSMA members are invited to attend the Interim Session, which will be held November 10-11 (Saturday and Sunday), 1979, at the Ramada Inn in Columbia.

Delegate Registration will begin at 8:30 a.m., Saturday, November 10. This year the Opening Session of the House will be called to order at 10:45 a.m., Saturday. Following presentations by MSMA President Andrew McCanse, M.D., and other reports of importance, all recommendations and resolutions will be referred to Reference Committees.

Reference Committees will begin at approximately 1 p.m. and will continue as long as necessary. Reference Committee reports will be prepared in time for consideration Sunday.

MSMA members are welcome to attend all sessions of the House and to voice their opinions on resolutions and reports before the Reference Committees on Saturday afternoon.

The Final Session of the House will begin with a breakfast at 7 a.m., Sunday. Immediately following will be House action on the reports of the Reference Committees.

Resolutions from component medical societies or MSMA members must be submitted to the MSMA Headquarters by October 10 to be included in the Delegate's Handbook.

Resolutions submitted after the deadline, but prior to the Opening Session, must be provided to each Delegate by the sponsor at least 24 hours before the Saturday session. Introduction of late resolutions at the Opening Session, requires a two-thirds vote. On Sunday, a resolution requires unanimous vote for introduction.

Those members wishing to attend the Interim Session should clip the accompanying Reservation Card and mail it directly to the Ramada Inn, Interstate 70 at Highway 63 North, Columbia, Missouri 65201.

RAMADA
INN

Missouri State Medical Association
Interim Session
November 10-11, 1979

Name ______________________
(Please Print or Type)

Address ______________________

City/State/Zip ______________________

Arrival Date: ________ Arrival Time ________

Departure Date: ________ Departure Time ________

NOTE: Reservations must be made 30 days prior to opening date of session.

Room Rates: Single $22.00 Double $29.00

A reminder

ZYLOPRIM®

(allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

INDICATIONS AND USE: This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim® (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

CONTRAINDICATIONS: Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.

WARNINGS: ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy, particularly in patients with pre-existing liver disease.

Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

In patients receiving Purinethol® (mercaptopurine) or Imuran® (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

Usage in Pregnancy and Women of Childbearing Age: Zyloprim® (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

PRECAUTIONS: Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or subnormal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

ADVERSE REACTIONS:

Dermatologic: Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.
Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.
A few cases of alopecia with and without accompanying dermatitis have been reported.
In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

Gastrointestinal: Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

Vascular. There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angiitis which have led to irreversible hepatotoxicity and death.

Hematopoietic: Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim® (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

Neurologic: There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

Ophthalmic: There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

Drug Idiosyncrasy: Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

OVERDOSAGE: Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

HOW SUPPLIED: 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Photo-Comment by James W. Clawson, M.D., Springfield

Editor's Corner

THE OLDER AMONG US

Looking back on the past ten years, I find the medical profession has been beset from every quarter. It would take a long time for anyone to make me believe this is coincidental. It has been too concerted, too insistent and it has been too sparing of other sectors of our society which, on the same bases, are equally deserving of social criticism.

Curiously, however, I have never known medicine to be castigated for an immense problem of social import which it has created, and the blame for which has never been laid at its door. This is:

> THE ADVANCES OF MEDICINE DURING THE LAST GENERATION HAVE GREATLY PROLONGED LIFE, BUT HAVE DONE LITTLE TO POSTPONE SENESCENCE.

This terrible problem has come into focus at a time when prosperity has been indecently rampant and when programs of social welfare have been invented to shunt our elders onto someone else — anywhere else — as long as they do not end up in our homes.

This is humanly understandable. What is the place of people who live longer and longer by grace of the discoveries of medical research? What provision should (or must?) be made for legions of 85-year-old semi-invalids in homes where there are three cars in the garage, a home on the lake and teen-agers reared without parental restraint or family tradition?

I must confess I do not know. Clearly, the social programs have provided the most superficial of answers — voting public funds to our "senior citizens." This gives them money, but no love or concern. This gives them nursing homes where they dwell ammoniacally in suspended animation. A generation ago they died amongst family, perhaps not ideal but probably preferable to the fashion in which they are kept breathing for ten more years and die now.

What is the answer? The answer is obviously not a medical one. If the medical profession is to maintain any posture at all, it must certainly prolong life. Without that concept, medicine becomes indefensible.

At that point, it is society, not medicine, which must assume responsibility and develop an awareness that some have lived so long as to only consume air, space and food. These commodities, somewhere in time, will become critically finite.

But, before society reluctantly assumes its role, medicine will come increasingly under attack. Those 70 will live into their 80s; those 80 into their 90s. The cost of medical care will escalate because the cost is necessarily focused toward the aged simply to keep them alive. And the blame for that increasing medical cost will be, right or wrong, directed at the physician.

Keep them going on and on with medical sophistication? I'm happy that the decision is not mine. But it is there to be made. And it will not be a medical decision.

Wilfred E. Wooldridge

Wilfred E. Wooldridge, M.D.

YOU'LL GET PROMPT PROFESSIONAL RESULTS WHEN YOU REFER A HEARING-IMPAIRED PATIENT TO A

Beltone®

Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

Lowell G. Bennett
Beltone Hearing Aid Service
318 W. Walnut Street
Springfield, Missouri 65806
(417) 866-0551

Len Gidley
Beltone Kansas City Hearing Aid Service
1001A Grand Avenue
Kansas City, Missouri 64106
(816) 471-1943 (816) 471-4105

Beltone Hearing Aid Service
222 Kirkpatrick Building
St. Joseph, Missouri 64501
(816) 279-6501

Don Hicks
Beltone Hearing Aid Service
North Park Mall
101 Range Line Room 248
Joplin, Missouri 64801
(417) 624-0931

Dean Jones
Beltone Hearing Aid Service
P.O. Box 682 400 E. High
Jefferson City, Missouri 65101
(314) 635-3557

Beltone Hearing Aid Service
21 North 10th
Columbia, Missouri 65201
(314) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Servic
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Servic
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Servic
State Fair Shopping Cente
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

Beltone Hearing Aid Servic
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Servic
101 E. Main
Richmond, Missouri 64085
(816) 776-2600

Beltone Hearing Aid Servic
320 Spring
Sweet Springs, Missouri 65
(816) 335-6727

Beltone WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

NDC 0108-5022-01
For I.V. or I.M. injection or I.V. infusion
Tagamet® HCl Injection
brand of
cimetidine
hydrochloride
Each 2 ml. contains, in aqueous solution
hydrochloride equivalent to
phenol, 10 mg.
SK&F LAB CO.
Subsidiary of SmithKline
2 ml. = 300 mg.
Tagamet
(cimetidine HCl
300 mg.
cimetidine/2 ml.
Tagamet
brand of cimetidine
Tablets
100 tablets
NDC 0108-5013-20
SK&F LAB CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation
SKF
T13

Tagamet®
brand of
cimetidine

How Supplied:
Pale green 300 mg. tablets
in bottles of 100 and Single Unit Packages of 100
(intended for institutional use only).
Injection, 300 mg./2 ml.,
in single-dose vials
and in 8 ml. multiple-dose vials,
both in packages of 10.

SK&F LAB CO.
a SmithKline company

When painful spasm
is the presenting
symptom...

in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

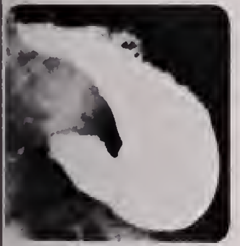
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.

Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS
Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia, increased ocular tension; loss of taste, headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg. capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily *Children* 1 capsule or teaspoonful syrup three or four times daily. *Infants.* ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults.* 1 tablet three or four times daily Bentyl Injection: *Adults.* 2 ml. (20 mg.) every four to six hours intramuscularly only NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE. The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215, U.S.A.

your help is needed by Missouri's future practicing physicians!

The Missouri State Medical Foundation (MSMF) was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

As other loan sources are becoming less available, the Foundation is growing into one of the major sources of loans for aspiring physicians. Send your check today!

Give now to the

MISSOURI STATE MEDICAL FOUNDATION

SPONSORED BY THE
MISSOURI STATE MEDICAL ASSOCIATION
113 Madison St., Jefferson City, Mo. 65102

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 509(a)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

Special Article

What Is Right With American Medicine

CARLOS PESTANA, M.D., Ph.D.
Health Sciences Center
University of Texas, San Antonio

This article was brought to our attention by colleagues in Rolla.

It was delivered as an extemporaneous address to the graduating class of the University of Texas Medical School, San Antonio in the summer of 1977.

The author of the address is Associate Dean for Student Affairs and Professor of Surgery at that institution.

There is much interesting thought in this address; some of it debatable, all of it provocative. Certainly, it merits consideration and nobody can read it without becoming better informed and, quite possibly, wiser. — ED.

I HAVE WATCHED with increasing discomfort the mounting attacks on our profession, and I have sensed the impact that such criticisms have on medical students. Today's physicians graduate with acquired collective guilt because their young and idealistic minds are easily receptive to the arguments of our critics. The best graduation gift that I can give these students is my perspective of what is *right* with American medicine.

To present such a defense of today's medicine in this publication might seem as superfluous as preaching about church attendance to those sitting in the church. But many physicians echo the critics of medicine. And not all of them are the stereotyped flaming liberals of academia; many are well-intentioned practitioners who have succumbed to the sheer volume, if not the intrinsic merit, of the critics' arguments. Maybe we should examine those criticisms in greater depth.

Two topics seem to dominate the antimedical repertoire: medicine's preoccupation with treatment, as opposed to prevention, of disease; and the runaway cost of medical care.

Preventive medical care, we are told, would be he answer to all our problems — if it were not for he dark conspiracy of the medical profession that stubbornly refuses to pay attention to it. The subject figures prominently in the interviews with medical school applicants. They say they are going to spurn the money-making ways of their predecessors and stamp out disease before it occurs. As I listen to this accusation and reflect on my own life experiences, I can hardly believe that Americans have the gall to complain about the tatus of preventive health care in this country.

When I was a child, the fear of acquiring a communicable disease was part of everyday life. A vivid memory illustrates the point: As a boy in the Canary Islands, I used to take a bus from my little own to the capital of the island. The bus ride was noisy one. People in the Canary Islands speak apidly and loudly, so the bus was always filled with conversation, laughter, and noise. But then there was a turn in the road, and the bus came in view of a large building on top of a hill. Suddenly there was a perceptible change in mood among the passengers. The laughter died away, there was silence, and people looked fearfully at the building. The building was a tuberculosis hospital, and almost everyone on that bus had a relative, or a friend, or a friend of a friend, whose life was slowly wasting away behind those walls.

I later moved to Mexico, where malaria was endemic, where typhoid fever and brucellosis were rampant, and where, in the state of Chiapas, there were little villages where everyone was blind from onchocerciasis. Still later, I came to the United States, this overdeveloped country where you can drink water from the tap, and where infectious diseases practically have been eliminated, and I am told that there isn't enough being done about preventive medicine in America!

Perhaps what the public means is that a great deal was done about preventive medicine in the past, but nothing is being done about preventive medicine now. Yet, if you look at the facts and figures, that is not the case. A case in point is infant mortality. A few years ago, you read that health care in the United States was disgraceful because infant mortality placed us number 16 in the world. But look at the figures. A couple of decades ago there were 29 deaths per 1,000 live births. By 1970, it was down to 20; two years ago, 16; and last year, 15.

I don't believe that preventive medicine is either dead or at a standstill in America. I think there is another angle.

Wheezing and coughing from smoking, he told the physicians it was their duty to keep him healthy.

Preventive care takes two different forms. One type includes those things about which we as individuals don't have to do anything. The sanitary engineers design the water supply system and the basic scientists develop the vaccines. But in the other type of preventive care, individuals have to do something; specifically, change their lifestyles. It is this aspect that has had a notable lack of success in America.

A few years ago, I went to a medical meeting where one of the topics was the American public's perceptions of the role of preventive medicine. A labor leader was the last panelist scheduled to speak. For an hour or two, he sat on the podium in full view of the audience, smoking one cigarette after another. After he had finished a pack of cigarettes, he went to the microphone. Wheezing and coughing, and in a raspy voice, he told the audience of physicians that it was their duty to keep him healthy through preventive care.

This same attitude exists about alcohol and overeating. So, I will have to disagree with the criticism that medicine doesn't do enough about preventive health care. It isn't medicine's fault. It is the public's fault.

The other aspect of health care which bothers the American public is its cost. I don't deny that cost is a significant problem, but the public seems to feel that the runaway cost of medical care is the result of a conspiracy on the part of the medical profession. There are several facets to this issue.

The public perceives that physicians make too much money. I propose that physicians do not make too much money. My argument is not based on a comparison between the income of physicians and the income of other people who make more money. The point is not how much Barbara Walters gets paid, or how much can be made by playing baseball or practicing law in Washington, DC. The point is: physicians do not enjoy a privilege denied to other Americans in terms of financial reward for the work they do. The key is: *for the work they do.*

To illustrate this point, I made some calculations based on two hypothetical people, both of whom finished high school at the same time. I made one of them study to become a cardiovascular surgeon. I made the other one a plumber.

Then, I calculated how many hours per year the college student worked, and what his or her budget was. The hypothetical student plumber worked the same number of hours, and limited himself to the same expenses to which college and medical students must limit themselves. I did this for a total of 20 years — four years of college, four years of medical school, seven years of internship and residency training, and five years of paying back debts and building up a successful practice.

In each of those years, I had the medical student accumulating debts and acquiring knowledge. The plumber, in the meantime, was accumulating wealth. I was careful to have the plumber pay income taxes every year, and I deducted that from the calculations. He put whatever money he had left into the bank at 8% interest.

At the end of the 20 years, I had the student, now a cardiovascular surgeon, making a net annual income of $100,000. Latest statistics show that only one in eight physicians reaches that level of income, but I picked it because it seems to be a magic number that signifies excessive income.

At the end of those 20 years, the plumber, having worked at union rates, also was making $100,000 a year. Most of it was not from working as a plumber the same number of hours as the cardiovascular surgeon was working; most of it was from the interest on the nearly $1,000,000 that, by then, he had in the bank.

I made some calculations based on two hypothetical people, a cardiovascular surgeon and a plumber.

The point I'm trying to make, obviously, is not that most plumbers are millionaires. The point is that anyone who has the discipline to work, and the discipline to limit his expenses in the manner in which medical students work and limit their expenses, can achieve the same level of financial reward in a less glamorous profession.

But it's not only the income of physicians which is bothersome to Americans. Many statements also are made about the cost of health care per se, the cost of what we do to our patients or advise our patients to have done. Some of the statements, I am sorry to say, are really nothing more than catchy phrases or political slogans. There is one that bothers me a great deal. I hear it very often from members of the medical profession who say it with a deeply felt sense of guilt: "Did you know that last year General Motors paid more money for the health care of their employees than they did for steel?"

I see that statement as one of the best examples of the art of the demagogue. We know that an automobile is made mostly of steel, and without thinking about it, we make the mental association that most of the cost of a car must be the cost of the metal. And if health care is now more expensive than that, no wonder that that little Chevrolet you want to buy lists for $6,500. But a regular size American sedan has about two tons of steel in it, which sells for about $70 to $80 a ton. That automobile contains about $150 worth of steel, and all the rest of the price is the cost of the *people* who made that metal into a car.

Cost of health care criticism is nothing more than catchy phrases or political slogans.

General Motors actually released the exact cost of health care which is included in the price of each car: $175 out of the $6,500, which is mostly the cost of the *people* who made the car. When I see the figure in that light, it doesn't sound so outrageous to me.

General Motors released another figure that you never hear anybody talk about. Each car also has $200 worth of complying with government paper work. Not complying with government regulations, not safety equipment, not antipollution equipment, just $200 worth of paper shuffling.

Another statement made about the cost of health care is that it approaches 8% of the gross national product. What I'd like to know is, how much *should* a country spend on health care? Why is 8% an outrageous amount? After all, percentages of the gross national product simply reflect how wealthy a society is. In a very poor country, the gross national product goes for food, clothing, and shelter. There is nothing left for anything else. But, as a society becomes more wealthy, there are more resources left for other services, such as medical care.

Is it that 8% by itself is too much of a percentage, no matter what it might be devoted to? That's not the case either. Many countries, at many times, have devoted a far larger share of the gross national product to a given activity which, at that time, was important for the country. Look at the amount of the gross national product that goes for defense in the Middle Eastern countries; it is much more than 8%. This figure of 8% for health care is simply a manifestation that we give some priority to health care.

The medical care you could buy in the 1950s isn't exactly the same that you can buy today.

But unhappiness with that 8% is compounded by the upward trend of such expenditures. This *is* a serious problem, and a solution is needed. But rhetoric seldom provides the solution. A case in point: We were reminded, not too long ago, by the President of the United States, that health care costs in this country have gone up 1,000% from 1950 to 1977. I'm sure that is true.

But let's remember that the medical care you could buy in the 1950s isn't exactly the same that you can buy today. If, in 1950, you had a heart condition — a bad valve or bad coronaries — you could take diuretics and digitalis for some relief. When those medicines no longer worked, you got short of breath and you died.

In 1978, if you have heart disease, you still can buy diuretics and digitalis at prices that have not even kept up with inflation. The difference is that in 1978, when those medicines stop working, you have a choice. You can get short of breath and die, or you can go to your cardiovascular surgeon and get a new valve put in, or get new coronary arteries — at great cost.

If you had renal failure in 1950, you didn't have to spend any money on your renal failure. You just limited your diet, and when your kidneys could no longer handle the problem, you died. Today, you can go on dialysis or have a renal transplant — at far greater cost.

The point is, there's no use becoming nostalgic about the medicine of 1950 and its price because, although 1950 medicine is available in 1978 at the 1950 price, nobody's buying it.

So, one element in the increasing costs of health care, is the availability of newer and more expensive treatments which are demanded by those who can afford them. In that sense, medicine, by virtue of its spirit of scientific inquiry, has become a victim of its own success, vilified and accused by the same public that demands new miracles because the miracles carry a price tag.

In addition to expensive progress, there is another factor. A factor that was introduced into the equation by the same politicians who now decry the cost of health care. It began years ago as a catchy phrase, a political statement, a slogan tossed around with abandon by those who have not yet learned that there is no such thing as a free lunch. The statement that has reached so deep into the consciousness of the American people that it has become a national commitment: Health care is a right, and not a privilege.

I'm not quibbling with the intent; the intent is admirable. It would be wonderful if health care were a right, and not a privilege. What disturbs me is that this grandiose promise has been made to the American people without thinking about how it is going to be implemented.

A society can make such a commitment if it can afford that commitment. America could easily make a commitment that everybody is entitled to food, and, to some extent, that commitment exists in our society. We don't have people dying of starvation in America as they do in the sub-Saharan countries. Yet, no one would dream of making a commitment in America that everyone is entitled to caviar and lobster every day, because we could not afford that.

In the 1930s and 1940s, it could have been very easy for America to make a commitment that health care should be a right, and not a privilege, because in those days the state of the art was such that you could buy health care for a reasonable amount of money. But when you put together the inevitable fact that the more advanced health care becomes, the more expensive treatment becomes, on one hand, and the commitment on the other hand that this is to be a right for everyone, eventually you are going to reach an intolerable situation.

Within that framework, I believe there is no solution. The possibilities just don't seem feasible. One possibility would be to stop medical research and accept the state of the art as it is today as the final word in medicine. Then, of course, cost would not go up. I doubt that anyone would think of that approach to the problem as sensible.

We could, on the other hand, allow medical research to go on, but suppress and prohibit new treatments that were too expensive. But that solution also would pose a difficult moral dilemma, because we live in a society where different people have different incomes. What would you do about a millionaire, for instance, who was going blind, and somebody discovered a treatment for his blindness that costs half a million dollars? The country could not afford such treatment for everyone, and thus, it could not be called a health care right for all people. Are you going to say to that millionaire, "Look, with your money you can buy a yacht, you can buy a private airplane, you can buy a country home, but you cannot buy your eyesight. We're going to prohibit you from doing it because we don't have enough money to buy everybody the same thing"? I'm not sure that would be a sensible solution either.

Perhaps the solution will have to be a different commitment to the American public, a commitment which will not be an empty promise that cannot be fulfilled. It will have to be a commitment that is more in keeping with the reality of what the country can do, a commitment to *some level* of health care, as a right. I don't see how the commitment can be open-ended while there continue to be further research and further advances in medicine, with inevitable higher costs. But as long as there is not a politician with enough guts to say that to the American people, medicine will continue to be the culprit that stands in the way of Utopia.

I know that my opinions about medicine are not shared by everyone, particularly young men and women. Perhaps some of them are offended by my statements. I am sure that I disappoint those who tend to look at what is wrong, rather than defend what is right. But I have hope. Our medical school graduates still have some growing to do. Experience and maturity frequently change perceptions and viewpoints.

Winston Churchill expressed it very nicely when he said, "If at age 20, you are not a liberal, you don't have a heart; but if at age 40, you are not a conservative, you don't have a brain."

—Reprinted with Permission from *Texas Medicine*, August, 1978

Generics save money. Big money!

The FTC estimates that $400 million ould be saved annually on the nation's x bill if physicians prescribed generics. re you saving *your* patients extra dollars?

Purepac, America's leading manufacurer of a national brand of generics, vould like to show you the tremendous avings possible with just three of our 700 eneric products:

RUG		AVERAGE RX PRICE (100's)	$ SAVINGS WITH PUREPAC	% SAVINGS WITH PUREPAC
avabid Capsules*	150 mg.	$10.32		
urepac Papaverine	150 mg.	3.95	**$6.37**	61.7%
quanil Tablets*	400 mg.	8.15		
urepac Meprobamate	400 mg.	1.85	**6.30**	77.3%
ibrium Capsules*	10 mg.	8.76		
urepac Chlordiazepoxide HCl.	10 mg.	3.90	**4.86**	55.4%

egistered trademarks of Marion Labs., Wyeth Labs., Roche Labs., respectively

Purepac generics save money. Big noney. Purepac is dedicated to providing our patients with quality products that re equivalent to their brand name ounterparts at significant savings.

But we can't do it alone. We need our cooperation.

Send for Purepac's *free* Brand Name/Generic Name Reference Chart today. You'll receive an alphabetical listing of brand name drugs with their generic counterparts.

And next time you write a prescription, write for Purepac brand generics. Your patients will know you care.

PUREPAC. Competitive prices and peace of mind.

FREE!

Please send me my FREE copy of Purepac's Brand Name/Generic Name Chart.

Name________________________

Address______________________

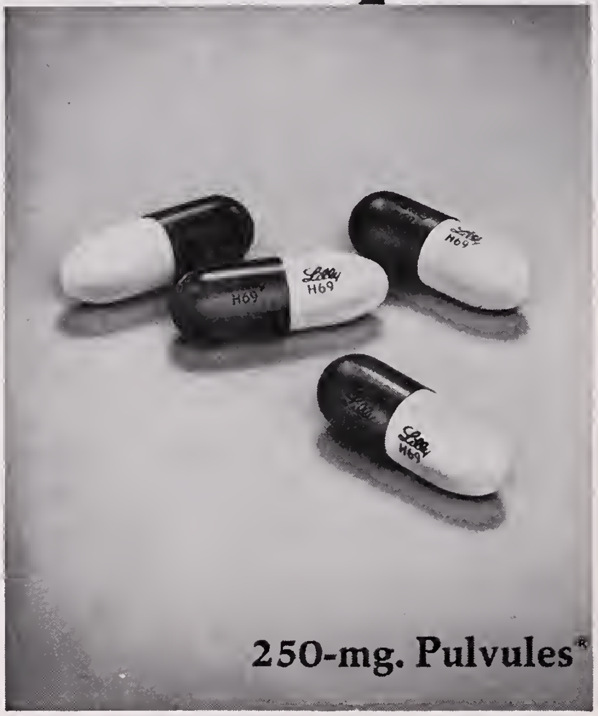
City__________State______Zip____

Mail to Purepac Pharmaceutical Co.,
200 Elmora Avenue, Elizabeth, N.J. 07207

MS 979

PUREPAC
Elizabeth, NJ 07207
THE LEADING NATIONAL BRAND OF GENERICS

easy to take



250-mg. Pulvules*

Oral Suspension
250 mg./5 ml.
100 and 200-ml.
sizes

125 mg./5 ml.
60, 100, and
200-ml. sizes

Pediatric Drops
100 mg./ml.
10-ml. size

Keflex®
cephalexin

Lilly

500738

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Volume 76, Number 9—September, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Copyright, 1979 by Missouri State Medical Association. All Rights Reserved.

J. REGAN THOMAS, M.D. *and*
J. BRAD ALLARD, M.C.D., *Columbia*

Diagnosis and Treatment of Serous Otitis Media

Serous otitis media is the most common cause of hearing loss in children. Undetected and untreated, it may proceed to a number of serious complications as well as hinder speech development and social adjustment. The authors point out the importance of impedance tympanometry in the diagnosis and evaluation of the patient with serous otitis media.

Dr. Thomas is an Assistant Clinical Professor of Surgery (Otolaryngology), University of Missouri School of Medicine and is in private practice. Mr. Allard is in the private practice of audiology.

Serous otitis media (SOM) is a clinically noninfected middle ear effusion. It is the most common cause of conductive hearing loss in children and is found in about 5% of all school children.[1] SOM and its sequelae make up a large part of the pediatric population's ear disease seen in the otolaryngologist's office. It also is seen frequently by the pediatrician, family practitioner and general practitioner.

The usual symptom of SOM is conductive hearing loss, though feelings of fullness, distortion of sound and ear popping or cracking are sometimes noted. Occasionally, tinnitus and dizziness may be symptoms described by older children. The condition is generally painless unless it becomes infected and develops into a suppurative or purulent otitis media.

The etiology of SOM remains debatable at this time, and multiple factors are probably involved. These children, however, appear to have a basic abnormality which, from a variety of underlying causes, results in functional Eustachian tube obstruction.[2] The management should be directed towards assisting middle ear ventilation. The traditional mechanism by which SOM developed was felt to be from a mechanical obstruction of the Eustachian tube by edema or an enlarged and infected adenoid mass. Suggestions of loss of normal physiologic function of mucociliary action and peristalsis and, perhaps, a "surfactant-like substance" have been proposed as the basic problem. It is common for these children to be experiencing allergic responses and such responses may also involve the Eustachian tube and middle ear mucosa.[3] Metaplasia and inflammatory changes of the middle ear space, with an increase of mucous-producing cells, have been demonstrated by several investigators.

Undetected and not treated, SOM may lead to a thinned, atelectatic tympanic membrane, retraction and cholesteatoma. Recurrent infection and acute purulent otitis media is a common sequela with its inherent risks. This may initiate the inflammatory state of the middle ear mucosa noted above in a self-perpetuating, altered state in the middle ear and Eustachian tube.

Hearing loss secondary to SOM varies, but it may be severe enough to cause delayed or poor speech development in younger children and difficulties with educational and social experiences

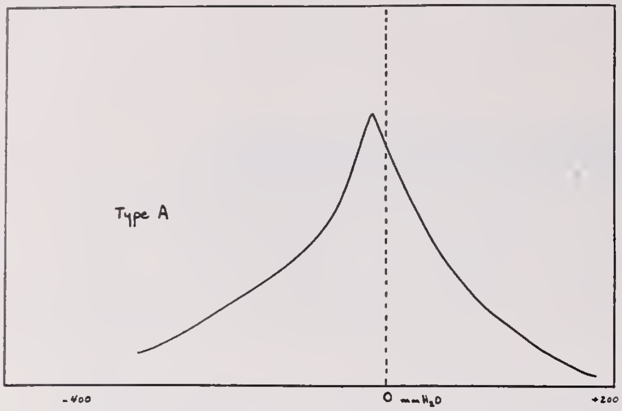


Fig. 1 Tympanogram configurations Type A.

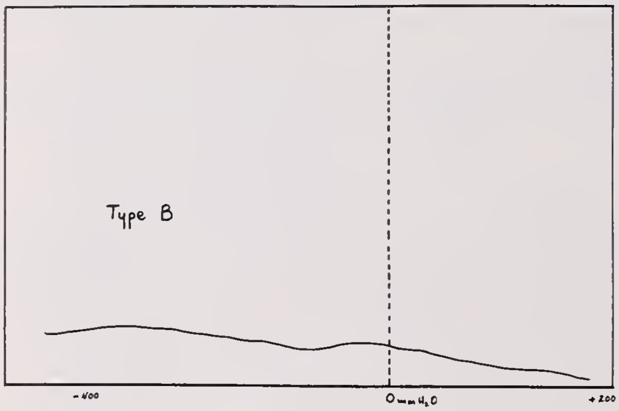


Fig. 2 Tympanogram configurations Type B.

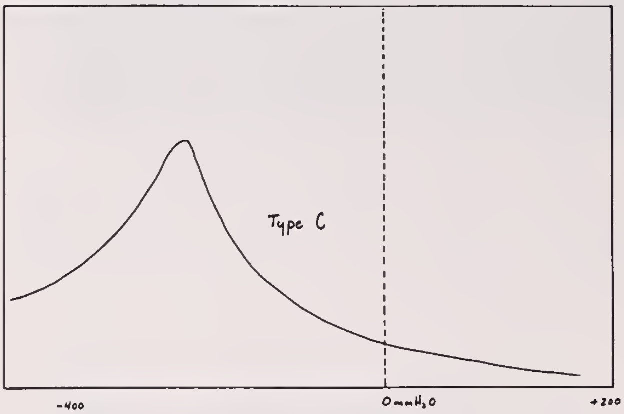


Fig. 3 Tympanogram configurations Type C.

of the older child. The hearing loss is classically conductive in nature, although some have suggested development of a sensorineural loss, especially if there has been a history of acute purulent otitis media.[4] Arnold *et al*[5] has demonstrated some sensorineural loss in up to 20% of the children with chronic SOM. He attributes this to the mucous effusion and altered middle ear mucosa influencing the oxygen tension in the middle ear on the oxygen tension in the inner ear.

DIAGNOSIS

Diagnosis can be made on a physical examination with the classic patient showing a conductive hearing loss on tuning fork testing and a retracted tympanic membrane or evidence of effusion behind the drum on otoscopy. A pneumatic otoscope is often helpful in demonstrating a lack of normal mobility of the tympanic membrane. Unfortunately, these indicators may at times be equivocal, particularly in a poorly cooperative patient.

The highest incidence of SOM occurs in children between three and six years of age,[6] and an objective reliable aid to diagnosis is of great benefit. Impedance tympanometry has provided an excellent tool to this end. In a presentation to the First International Symposium on Pediatric Otorhinolaryngology, Jepsen stated that, "Looking back on the days prior to tympanometry, we now feel that many cases of SOM probably were missed. Tympanometry is certainly a necessity today."[7] The authors strongly concur.

IMPEDANCE TYMPANOMETRY

Tympanometry refers to the clinical measurement of eardrum mobility under air pressure changes induced artifically in the ear canal.[8] The technique is briefly as follows:

> A probe with rubber tip is inserted into the ear canal creating a hermetic seal. Then, a 220 Hz tone of constant intensity is introduced through the probe while air pressure in the canal is varied from +200 through −400 mm H_2O. That portion of the 220 Hz signal which is not absorbed by the ear is reflected back to a sensitive meter, or chart (tympanogram) which shows the amount of reflected energy relative to the total energy. Since the tympanic membrane is being manipulated by air pressure in the canal, it follows that the greatest amount of energy will be absorbed when the drum is at normal anatomical position rather than when retracted (low tympanic pressure), or distended (fluid filled tympanum).

Jerger has described three basic tympanogram configurations and has labeled them as Type A, B and C.[9]

The Type A pattern (Fig. 1) is seen with the healthy middle ear. The tympanic cavity is free of fluid and the Eustachian tube is patent. Inspection of the tympanogram reveals that a positive and negative pressure introduced into the ear canal result in reduced absorption of the 220 Hz tone, while pressures near 0 mm H_2O (ambient pressure) allow full mobility of the drum (note peak).

Type B patterns (Fig. 2) reflect a relatively flat configuration. Distinct peaks do not emerge in respose to variations in canal pressure. Such patterns testify that the drum is itself stiff and immobile. Tympanograms of this sort indicate the high tympanic pressure seen in SOM. This pattern may also be seen with tympanic membrane perforations which range from minute to large. Thus, the astute physician will closely scrutinize the tympanic membrane before making a final diagnosis. In such cases, the value of tympanometry is not diminished as one has been alerted that the middle ear is in some way abnormal.

Tympanometry pattern Type C (Fig. 3) points to a poorly functioning Eustachian tube. The peak in the high negative range (compare to Fig. 1) reveals that there is a high negative middle ear pressure due to poor ventilation. The Type C pattern then generally shows a distinct peak as opposed to the flat Type B pattern. Usually there is no fluid present in the middle ear.

At various times, one may see all of the tympanogram patterns described above in any given patient. A patient may go from a healthy middle ear (Type A) to a blocked Eustachian tube (Type C) and then proceed to the Type B pattern of middle ear effusion. With effective treatment, these may then, in reverse order, return to normal. Tympanometric monitoring allows the physician to document the patient's middle ear status as well as aid in visualizing his response to the treatment (Fig. 4).

Treatment

Serous otitis media appears to be ubiquitous, and yet there are still differences of opinion as to the appropriate treatment regimen. The program followed in our patients is directed toward returning middle ear ventilation. Initially, a trial of an antihistamine decongestant preparation is used. This is pursued for at least three to six weeks.

Holmquist, in a study of Swedish children, did a double blind investigation of the response of Eustachian tube function comparing an antihistamine decongestant preparation with a placebo. There was an improvement in 60% of the cases with the drug, while only 10% improved on the placebo.[10] However, in a double blind study comparing the use of a decongestant (pseudoephedrine) to a placebo, Alson *et al* did not find any significant improvement in their patient population and they do not recommend these compounds in the treatment of SOM.[11] Until this question is resolved, we continue to give our patients at least a trial regimen of an antihistamine decongestant preparation prior to recommending surgical intervention. Those children with an infection component to their history of ear disease may also be put on an appropriate antibiotic. Patients with evidence of allergic rhinitis or other allergic manifestations who do not respond to this regimen are evaluated as to the underlying allergies and may have desensitization recommended.

Fig. 4 Demonstration of the impedance audiometer.

Fig. 5 Placement of PE tubes using the operating microscope. Patient is under general anesthetic.

In those cases not responding to this conservative approach, myringotomy with placement of ventilation tubes is the alternative. This is accomplished with the aid of the operating microscope (Fig. 5).

In older children and adults, this can be done

(Continued on page 488)

CHARLES M. LUETJE, M.D. *and*
C. KEITH WHITTAKER, M.D., *Kansas City*

Acoustic Tumors and Other Cerebellopontine Angle Lesions

A Two-Year Surgical Experience

MORE THAN 90% of cerebellopontine angle tumors are acoustic tumors.[1] The two next common tumors are meningiomas and cholesteatomas. The most common symptoms caused by acoustic tumors are hearing loss and tinnitus. Therefore, the otolaryngologist will usually see these patients first. Because unilateral hearing loss and tinnitus are the first symptoms caused by acoustic tumors, every patient whose complaints are unilateral hearing loss and tinnitus must be thoroughly evaluated.

Impedance audiometry has replaced older audiometric tests such as Bekesy, SISI, ABLB and others. Brainstem electric response audiometry shows promise as a most valuable test. Tomograms of the internal auditory canal are commonly performed in most hospitals. Electronystagmography is routinely used in vestibular evaluation.

The most revolutionary advance in radiology has been the computed cranial tomogram. This has not replaced the posterior fossa pantopaque cisternogram but is a complimentary study. Acoustic tumors less than 1.5 cm are routinely missed on computed tomograms and will not be found unless a posterior fossa pantopaque cisternogram is performed. In fact, computed cranial tomography may have "set back" the early diagnosis of acoustic tumors.[2] This is because the physician assumes that the patient does not have a tumor if the computerized scan is negative. As will be pointed out in this paper, this is not the case.

Fourteen patients with acoustic tumors, one patient with a meningioma and one with a petrous apex cholesteatoma underwent surgery between October, 1976 and February, 1979. The operative results are reported in this series of 16 patients. There were no fatalities. Total tumor removal was obtained in all cases. Complete absence of facial function occurred in only one patient.

Dr. Luetje is in the private practice of otology and Dr. Whittaker is in the private practice of neurological surgery.

CASE COMPARISONS

Between the months of October, 1976 and February, 1979, 16 patients with cerebellopontine angle tumors came to surgery. Fourteen of those patients had acoustic tumors, one had a meningioma and one had a cholesteatoma of the petrous apex. All of these patients complained of hearing loss and balance disturbance.

The patient with a petrous apex cholesteatoma and the patient with a meningioma have previously been reported.[3] These two cases will not be discussed further except to say that in both cases, total removal was accomplished with preservation of normal facial function. The meningioma was removed through a suboccipital, retrolabyrinthine approach and the cholesteatoma through a middle fossa approach. The patient with the meningioma had a preoperative speech discrimination score of 2% and 11 months later, hearing was normal in the affected ear with a 92% speech discrimination score (Fig. 1).

The other 14 patients had acoustic tumors. The cases are presented in consecutive order in Table 1.

In eight of the 14 patients, the C-T scan was positive. Six of these eight patients did not have a pantopaque study. Two of the patients with positive C-T scans had pantopaque studies previously performed; the first 11 months before and the second after the C-T scan. Both of these patients were referred to us after their diagnostic studies. Of interest is the fact that six of the 14 patients with negative C-T scans had positive pantopaque cisternograms. Tumor size in these four cases ranges from 1 cm to 2.5 cm.

Tumor size in our series range from 1 cm to 5 cm. Tumor size was based upon configuration of

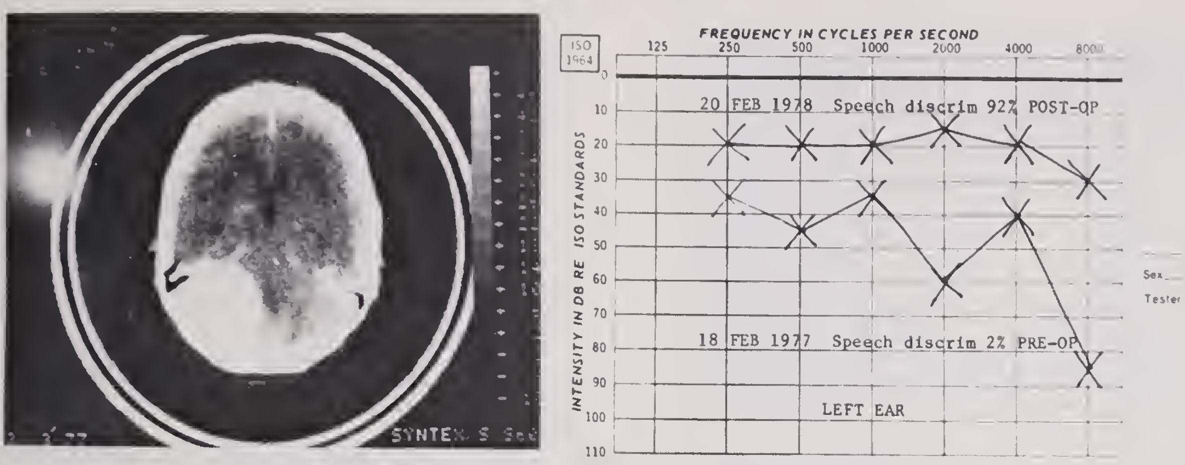

SYNTEX S
ISO 1964
FREQUENCY IN CYCLES PER SECOND
125
250
500
1000
2000
4000
8000
INTENSITY IN DB RE ISO STANDARDS
0
10
20
30
40
50
60
70
80
90
100
110
20 FEB 1978 Speech discrim 92% POST-OP
18 FEB 1977 Speech discrim 2% PRE-OP
LEFT EAR
Sex
Tester

Fig. 1 Five centimeter meningioma with pre- and postoperative hearing results.

the tumor on C-T scan, cisternogram and correlation with the surgical tumor bed following removal.

Immediate facial function and current status of facial function are compared in Table 1. Three-plus designation indicates perfect facial function. This includes tearing. Two-plus designation represents satisfactory facial function with some synkinesis and normal appearance in repose. One plus designation indicates some movement of facial musculature but is not acceptable as a good result although normal in repose.

The fourth patient in this series with a 5 cm tumor had no facial function postoperatively and the facial nerve was sacrificed. The sixth patient in the series had the facial nerve rerouted, separated from the geniculate ganglion, lifted out of the tympanic part and vertical segment through the mastoid and anastomosed to its entry zone at the brainstem. The nerve had been splayed out by tumor close to the brainstem and interrupted in order to insure total tumor removal. It is of interest that the patient has return of facial function to the lower and mid-face 12 months postoperatively and his forehead function is minimal. His face is normal in repose.

Follow-up ranges from 24 months to two months in this series. There were no fatalities, and total tumor removal was obtained in all cases. In the fourth patient, approximately 50% or more of the tumor was removed with the House-Urban rotary dissector through the translabyrinthine approach. The remainder of the tumor was removed three months later through a suboccipital procedure. (The neurosurgeon in this case was Charles Clough, M.D.)

The eighth patient was operated on through a suboccipital, transmeatal approach in an attempt

TABLE 1
ACOUSTIC TUMORS
N=10

			Facial Function					
Case	*Pantopaque*	*C-T*	IMMEDIATE	CURRENT	*Follow-Up*	*Fatalities*	*Tumor Size*	*Total Removal*
#1	(+)	(−)	+++	+++	24 mo	0	1.5 cm	(+)
#2	(+)	(+)	+++	+++	22 mo	0	3.0 cm	(+)
#3	(+)	(−)	+++	+++	17 mo	0	1.0 cm	(+)
#4*	Not done	(+)	0	0	13 mo	0	5.0 cm	(+)
#5	Not done	(+)	0	++	13 mo	0	4.0 cm	(+)
#6†	Not done	(+)	0	+	12 mo	0	4.0 cm	(+)
#7	Not done	(+)	0	+	12 mo	0	4.0 cm	(+)
#8‡	(+)	(−)	+	+++	6 mo	0	2.0 cm	(+)
#9	(+)	(+)	0	+	5 mo	0	2.5 cm	(+)
#10	(+)	(−)	++	++	2 mo	0	2.5 cm	(+)

* Secondary suboccipital procedure for total removal at 3 months.
† Rerouted VII nerve from mastoid into anastamosis at brainstem entry zone.
‡ Suboccipital, transmeatal approach to preserve hearing; unsuccessful.

to preserve hearing. This patient had a 2 cm tumor and had good speech discrimination score. Although we were able to obtain total tumor removal and perfect facial function at the end of six months, we were not able to preserve the cochlear nerve and she has no hearing.

Discussion

The goal of acoustic tumor removal is total tumor removal with the preservation of normal facial function. One would also like to preserve hearing. Preservation of hearing is possible approximately half the time when the tumors are small and limited to the internal auditory canal.[4] Recently, there has been discussion regarding the preservation of cochlear function through the suboccipital transmeatal approach to tumors 2 cm or less in size.[5-7] Glasscock has proposed extending the middle fossa approach for preservation of hearing to tumors up to 1.5 cm to 2.0 cm by ligating the superior petrosal sinus and opening the tentorium to obtain a view of the posterior fossa.[8]

Certainly, in the future, we will see more attempts at preservation of cochlear nerve function. However, preservation of VII function should remain of prime importance, taking priority over preservation of cochlear function. If both VII and VIII can be preserved, it would be ideal.

These patients were primarily operated on through the translabyrinthine approach with exception of patient #8, who was approached through a suboccipital, transmeatal route to preserve hearing. A suboccipital approach was necessary to complete the removal of the tumor in Case #4.

The advantage to the translabyrinthine approach is positive identification of the facial nerve at a point not involved by tumor where the nerve exits from the bone and the ability to dissect the tumor from the facial nerve. In addition, extradural cerebellar retraction may be accomplished with cottonoids over the dural flap. The translabyrinthine approach offers rapid access to the surgical field in case of postoperative hemorrhage. The tumor bed may be approached by quickly opening the postauricular incision, removing the fat that is used to close the defect and allowing the blood clot or hemorrhage to decompress itself. This can be done in the recovery room. The patient is then taken to the operating room for definitive control of hemorrhage. The translabyrinthine approach allows one to develop the capsule of the tumor, keeping the arachnoid sheath between the surgeon and the major blood vessels. Using the House-Urban rotary dissector, the center of the tumor can be decompressed and the capsule of the tumor developed allowing it to be dissected carefully toward its interior.

The major disadvantage of the translabyrinthine approach has been the lack of exposure. Decompressing the center of the tumor and allowing the capsule to be developed on itself centrally facilitate removal of the tumor through this approach. In addition, the dura may be incised behind the sigmoid sinus and the posterior-most aspect of the tumor dissected from the cerebellum through this approach.[2]

Another advantage to the translabyrinthine approach, well demonstrated by patient #6, is the ability to reroute the facial nerve from the mastoid and anastamose it at the brainstem entry zone. The facial nerve is usually splayed out from the tumor and dissection is difficult medial to the internal auditory canal. The distal segment can be rerouted and sutured to the stump of the facial nerve at the brainstem. One does not have this capability through the suboccipital transmeatal approach.

Tumor size is often difficult to estimate. The surgeon often overestimates the size of the tumor at the operating table. Many classifications have been proposed for judging tumor size. We propose that all tumors be henceforth measured accurately on C-T scan in millimeters or centimeters. A tumor shown only by pantopaque cisternography and not by C-T scan should simply be described as such. In this series, we tried to correlate findings on cisternography, C-T findings and the surgical bed at the end of tumor removal. We then listed tumor size by centimeter.

Pitfalls of Computerized Cranial Tomography

In November of 1977, 870 C-T scanners were operating and 155 additional ones were approved for use nationwide.[9] Although rapid advancements are being made in better resolution of updated scanners, those scanners in operation at present have pitfalls in the diagnosis of acoustic tumors.

Computed cranial tomography offers advantages over the conventional posterior fossa cisternogram. The C-T scan is not an invasive procedure and the risk of death due to an injected intravascular iodinated contrast material is less than 1 : 30,000. The C-T scan usually gives more accurate tumor-size assessment. Differentiation

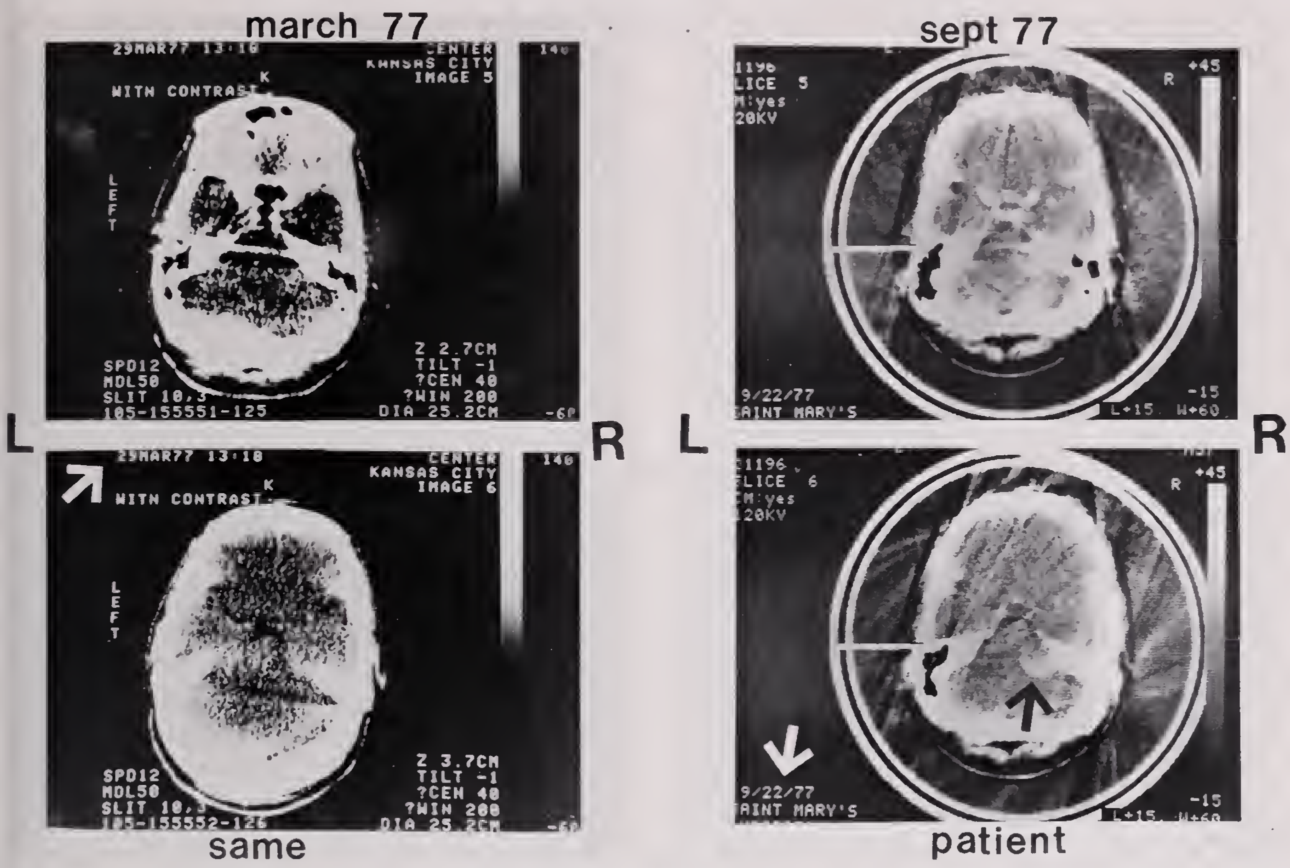


Fig. 2 *(Left)* "Negative" C-T scan of a 4 cm tumor inadequately enhanced. *(Right)* Same patient with acoustic tumor 6 months later, different scanner, adequately enhanced.

of acoustic tumors from meningioma, cholesteatomas and arachnoid cysts is possible. Recognition of associated conditions including bilateral tumors, arachnoid cysts, cerebellar infarct, hydocephalus, other intra-cranial tumors and some vascular abnormalities can be identified.

However, certain pitfalls occur with the C-T scan in evaluating patients suspected of having an acoustic tumor. Perhaps the two most significant are missing tumors less than 1.5 cm in diameter and a poorly performed C-T scan with inaccurate interpretation. The angle of cut by tomographic slice must be through the internal auditory canal and, thus, the examination must be monitored by a physician. Some older scanners did not allow simultaneous monitoring and precise level of cuts.

Other limitations include artifactual display with head movement and with droplets of pantopaque dye in the internal auditory canal from previous myelogram. Inadequate enhancement may lead to false negative scans (Fig. 2).

The C-T scanner may have set back the *early* diagnosis of acoustic tumors significantly because of the dangerous assumption that a tumor does not exist in the presence of a negative C-T scan. The C-T scan has not supplanted the pantopaque posterior fossa cisternogram. They should be complimentary studies.

In evaluating the suspected acoustic tumor patient when one has strong clinical suspicion based on audiometric, plain radiographic or tomographic findings and electronystagmogram (ENG), the appropriate sequence in diagnostic evaluation is the C-T scan and, possibly, the posterior fossa cisternogram. If the C-T scan is negative or questionable, a posterior fossa cisternogram should be performed. Tumors less than 1.5 cm are routinely not visible on C-T scan and will only be discovered by posterior fossa cisternogram.

Complications

In the series of ten patients with acoustic tumors, there were three complications (Table 2). The second patient had abdominal wound rejection to chromic sutures. This required careful cleansing of the abdominal incision, and it healed spontaneously within two to three weeks.

The sixth patient was placed on steroids the first

TABLE 2
ACOUSTIC TUMORS COMPLICATIONS
N=10

Case	*Complication*
#2	Abdominal wound rejection of chromic sutures
#6	Ruptured diverticulum with peritonitis, POD 3 (on steroids)
#10	CSF rhinorrhea requiring secondary closure, POD 12
#11	CSF rhinorrhea requiring secondary closure, POD 28

postoperative day in the intensive care unit because of mental confusion and large tumor size. The night of the second postoperative day, abdominal discomfort and distension developed. By the morning of the third postoperative day, a ruptured colonic diverticulum with peritonitis developed. The patient underwent a diverting colostomy which has subsequently been closed. In addition, cardiac arrhythmias developed and were controlled with cardiac medications.

The third and fourth complications were in the tenth and eleventh patients in whom a cerebrospinal fluid (CSF) rhinorrhea developed. This required reclosure of the wound on the 12th and 28th postoperative days.

None of these patients have had further neurological deficits other than abnormal facial function (Table 1) and loss of hearing.

It is important to stress the team approach to the care of these patients. The team approach consists of neuro-otologist, neurosurgeon, internist and anesthesiologist. In addition, the ward nurses, operating room nurses, scrub nurses and intensive-care nurses all are a part of the team. We have spent considerable time educating the nursing personnel and those involved in supportive care of these patients.

The sixth patient could very well have died had it not been for the astute diagnosis and management of the ruptured diverticulum and peritonitis.

We do not use antibiotics in these patients prophylactically. Since the release of cimetidine in the United States, we are considering using preoperative steroids on all patients. However, we have not had experience on this except for the tenth patient.

SUMMARY

In summary, we have surgically treated 16 patients with cerebellopontine angle lesions. Fourteen of these had acoustic tumors. With these, we have a zero mortality rate. Tumor size ranges from 1 cm to 5 cm. Most were managed through the translabyrinthine approach. This continues to be the approach of choice. The C-T scan is not the final answer in the diagnosis of acoustic tumors. It is a complimentary study with the posterior fossa cisternogram.

Since the patients usually complain of hearing loss and tinnitus, they should be referred to the otolaryngologist for testing. Unexplained unilateral hearing loss and tinnitus require further diagnostic evaluation with a high index of suspicion that an acoustic tumor may be present. With earlier diagnosis, smaller tumors will be identified and we will more satisfactorily preserve facial function. A future goal will be not only to preserve facial function but to diagnose these tumors early enough to preserve cochlear function.

ADDENDUM

Four additional patients with acoustic tumors have been operated on since the acceptance of publication of this paper. Their results are tabulated in Table 3.

REFERENCES

1. Hitselberger, W. E. and Gardner, G.: Other Tumors of the Cerebellopontine Angle. Arch. Otolaryngol. 88:712-714, 1968.
2. Glascock, M.E., Hays, J. W., Jackson, C. G. and Sternerson, R. L.: A One-Stage Combined Approach for the Management of Large Cerebellopontine Angle Tumors. Laryngoscope 88:1563-1576, 1978.
3. Luetje, C. M.: Nerve Hearing Loss: You Have to Live With It, or Do You? Missouri Medicine 75:125-130, 1978.
4. Brackmann, D. E.: Middle Cranial Fossa Approach, in House, W. E.

(Continued on page 488)

TABLE 3
ACOUSTIC TUMORS
N=14

			Facial Function					
Case	*Pantopaque*	*C-T*	IMMEDIATE	CURRENT	*Follow-Up*	*Fatalities*	*Tumor Size*	*Total Removal*
#11	Not done	(+)	+++	+++	6 mo	0	3.0 cm	(+)
#12	(+)	(−)	+++	+++	6 mo	0	1.0 cm	(+)
#13	(+)	(−)	+++	+	5 mo	0	1.5 cm	(+)
#14	Not done	(+)	+	+++	5 mo	0	2.5 cm	(+)

HARRY WRIGHT, M.D., STEPHEN F. BOWEN, JR., M.D.
and STEPHAN S. MORGAN, M.D., *St. Louis*

Orbital Blowout Fracture Due To a Diving Accident

Case Report

Orbital floor fractures can occur from many causes. One rare cause is the trauma to the orbital region resulting from diving into the water from a high diving board, as reported here. There is no permanent sequellae from the injury in this case. Considering the number of people who leap from springboards each year, it is remarkable that this injury has not been reported previously.

The authors are from the Department of Ophthalmology, St. Louis University School of Medicine.

BLOWOUT FRACTURES of the orbit are reported to be caused by a wide variety of insults to the orbit. An object larger than the globe but theoretically less than the total diameter of the orbit, when striking the center of the orbital entrance, directly transfers the force to the orbital contents. When this force passes through the globe, the floor of the orbit may rupture, most often in its middle third.[1-3] Our review of the literature failed to find previous documentation of a blowout fracture of the orbit resulting from a "face first" dive into the water from a springboard. We report such a case.

CASE REPORT

A 19-year-old man was first seen in June, 1977. He noted numbness over the left side of his face after diving into the water from a three-meter diving board the day before the initial examination. He struck the water with his face while attempting a complex dive. He was in the "tuck" position, but he did not hit his face against his knees. The feeling of numbness came on almost immediately after the incident. He developed ecchymosis and hemorrhage in both upper and lower lids in a few hours and also a subconjunctival hemorrhage in the left eye. He denied having diplopia at any time.

An examination revealed vision of 20/20 in each eye with correction. There was no restriction of motion of the globe in any field of gaze nor any diplopia. There was numbness on the left side in the distribution of the infraorbital nerve. There was a mild iritis, thought to be traumatic, in each eye. Results of the remainder of the eye examination were within normal limits *(Fig. 1)*.

Orbital x-rays showed a definite blowout fracture of the orbital floor on the left. Since there was no enophthalmos or diplopia, the treatment instituted was a steroid drop for the iritis. Surgery was not performed. The iritis cleared in about six days. Additional therapy was not needed. A follow-up examination five months after the injury revealed no ocular abnormalities. The numbness had completely cleared.

DISCUSSION

Blunt trauma to the globe and orbit is the usual cause of orbital blowout fractures.[1-5] The commonest causes are the automobile and the human fist and elbow.[2-5] Converse reported a blowout fracture of the orbit caused by a patient's fall while water skiing.[2] Whyte notices that orbital floor fractures occur in the area of the floor closest to the globe in 70% of his series.[6]

Our patient denied any possibility of striking his left eye with a hand, knee or object in the water during the dive. Without prior orbital x-rays, the possibility of a congenital weakness of the floor cannot be totally ruled out, although the

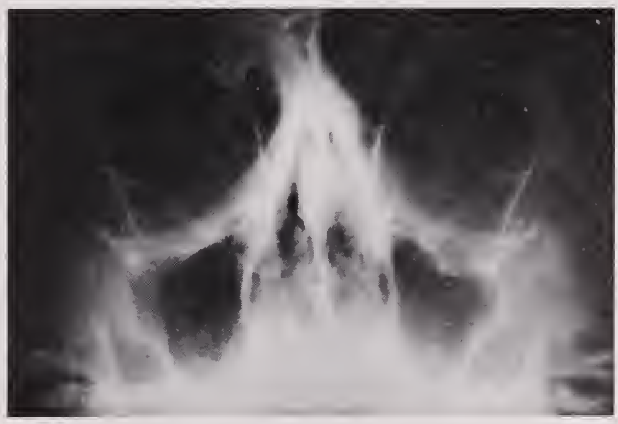


Fig. 1 An obvious depression of the roof of the left maxillary sinus on x-ray, with some haziness to the sinus in general, showing the blowout fracture.

radiologist found no positive evidence of this. All signs and symptoms were resolved within five months.

Considering the number of people who leap from springboards yearly, it is quite remarkable that this injury has not been previously reported.

SUMMARY

A 19-year-old white man sustained a blowout fracture of the left orbital floor while diving into the water of a swimming pool from a three-meter springboard. Orbital ecchymosis, iritis and hypesthesia in the distribution of the left intraorbital nerve accompanied the blowout fracture. No diplopia or limitation of upward gaze was found. Surgical correction was not required. All symptoms and signs had resolved completely five months after the injury.

REFERENCES

1. Converse, J. M., and Smith, B.: Blowout Fracture of the Floor of the Orbit. Trans. Am. Acad. Ophthalmol. Otolaryngol. 64:676, 1960.
2. Converse, J. M., Smith, B., Obear, M. F. and Wood-Smith, D.: Blowout Fractures: A Ten Year Survey. Plast. Reconstr. Surg. 39:20, 1967.
3. Greenwald, H. S., Keeney, A. H., and Shannon, G. M.: A Review of 128 Patients With Orbital Fractures. Am. J. Ophthalmol. 78:655, 1974.
4. Jaboley, M. E.: Ocular Injuries in Orbital Fractures: A Review of 119 Cases. Plast. Reconstr. Surg. 56:410, 1975.
5. Leibsohn, J.: Orbital Floor Fractures: A Retrospective Study. Ann. Ophthalmol. 8(9): 1057, 1976.
6. Whyte, D. K.: Blowout Fractures of the Orbit. Br. J. Ophthalmol. 52:721, 1968.

Reprints: Stephen F. Bowen, Jr., M.D.
16 Hampton Village Plaza
St. Louis, Mo. 63109

Serous Otitis Media

(Continued from page 481)

with the patient under a local anesthetic or topically with ionophoresis. In the younger or less cooperative child, a brief general anesthetic is usually required. Few otolaryngologists today advocate tonsillectomy as part of the treatment of SOM. There is some doubt as to the efficacy of adenoidectomy, and this course is not routinely advised unless the patient is having other specific symptoms of adenoid hypertrophy. It is advised occasionally as an adjunct to ventilation in the child who has previously required multiple myringotomies.

Those patients in whom middle ear effusion does not develop but who are shown by tympanometry to have significant negative pressure in the middle ear should be followed periodically and tympanograms repeated. If a conductive hearing loss develops, the treatment plan outlined above is then initiated. There is a positive correlation of hearing loss with increasing magnitude of negative middle ear pressure. A conductive hearing loss greater than 10 dB is found in more than 50% of patients with any degree of middle ear pressure.[12]

Increased awareness of SOM, aided by improved diagnostic ability with impedance tympanometry, can help to alleviate the most frequent otologic problem in children. Secondarily, this should decrease the incidence of the long term and more serious complications of this common disease.

REFERENCES

1. Sade, J. and Weismann, Z.: Middle Ear Mucosa and Secretory Otitis Media. Proceedings of the Shambaugh Fifth International Workshop on Middle Ear Microsurgery and Fluctuant Hearing Loss, Strode Publishers, Inc. p. 122, 1977.
2. Bluestone, C. D. *et al:* Effect of Inflammation on the Ventilatory Function of the Eustachian Tube. Laryngoscope, Vol. 87, No. 4, Part 1, p. 493, 1977.
3. Dockhorn, R.: Otolaryngologic Allergy in Children. Otolaryngologic Clinics of North America, Vol. 10, No.,1, p. 103, 1977.
4. Paparella, M.: Otologic Survey in Children. Otolaryngologic Clinics of North America, Vol. 10, No. 1, p. 145, 1977.
5. Arnold, W. *et al:* Sensorineural Hearing Loss in Mucous Otitis. Archives of Otorhinolaryngology, Vol. 215, p. 91, 1977.
6. Tarnopolsky, R.: Serous Otitis Media in the Small Community. Ear, Nose, and Throat Journal, Vol. 56, No. 4, p. 174, 1977.
7. Jepsen, O.: Neuro-otologic Examination in Pediatric Otolaryngology. Otolaryngologic Clinics of North America, Vol. 10, No. 1, p. 7, 1977.
8. Fulton, R. and Lloyd, L.: Audiometry for the Retarded. Williams and Wilkins Company, p. 177, 1969.
9. Jerger, J.: Clinical Experience With Impedance Audiometry. Archives of Otolaryngology, Vol. 92, p. 311, 1970.
10. Holmquist, J.: Panel: Therapy of Secretory Otitis Media. Proceedings of the Shambaugh Fifth International Workshop on Middle Ear Microsurgery and Fluctuant Hearing Loss. Strode Publishers, Inc., p. 139, 1977.
11. Olson, A. L. *et al:* Prevention and Therapy of Serous Otitis Media by Oral Decongestant: A Double-Blind Study in Pediatric Practice. Pediatrics, Vol. 61, p. 679, 1978.
12. Cooper, J. C. *et al:* The Significance of Negative Middle Ear Pressure. Laryngoscope, Vol. 57, No. 1, p. 92, 1977.

Cerebellopontine Angle Lesions

(Continued from page 486)

and Luetje, C. M. (Ed.): Acoustic Tumors: Diagnosis and Management. Baltimore: University Park Press, 1979 (in press).
5. Seminar on Diagnosis and Management of Acoustic Neuromas and Skull Base Tumors. Feb. 28-Mar. 3, 1978, Ear Research Institute, Los Angeles, Calif.
6. DiTullio, M. V., Malakasian, D. and Rand, R. W.: A Critical Comparison of Neurosurgical and Otolaryngological Approaches to Acoustic Neuromas. J. Neurosurg. 48:1-12, 1978.
7. Smith, M. F. W., Clancy, T. P. and Lang, J. S.: Conservation of Hearing in Acoustic Neurilemoma Excision. Trans. Am. Acad. Ophthalmol. Otol. 84:704-709, 1977.
8. Glasscock, M.E., Hays, J. W., Miller, G. W., Drake, F. D. and Kanok, M. N.: Preservation of Hearing in Tumors of the Internal Auditory Canal and Cerebellopontine Angle. Laryngoscope 88:43-55, 1978.
9. Fineberg, H. V.: Evaluation of Computed Tomography: Achievement and Challenge. Am. J. Roentgenol. 131:1-4, 1978.

JOSEPH C. STOTHERT, JR., M.D., THEODORE J. DUBUQUE, JR., M.D.
and SOMNUK SRIVISAL, M.D., *St. Louis*

Massive Hepatic Necrosis Following Selective Arterial Embolization

Case Report

THERE HAS BEEN ENTHUSIASM recently for the use of intra-arterial vasopressors in the patient with acute gastrointestinal hemorrhage. Intra-arterial vasopressors may be a safe alternative to operation on the critically ill patient. However, difficulty in controlling hemorrhage from larger arteries has been reported.[1-5]

Since the original article by Rosch, Dotter and Brown, various methods of selective arterial embolization have been employed for the successful control of bleeding. Due to the nature of bleeding duodenal ulcers, reports have appeared indicating that arterial embolization via selective catheterization may be the procedure of choice for poor-risk surgical patients.[6, 7] We report a case in which a previously unreported complication developed after embolization.

CASE REPORT

A 35-year-old man was referred to St. Mary's Health Center in September, 1977 because of recurrent upper gastrointestinal hemorrhage. A subsequent evaluation revealed Hodgkin's Disease. At staging laparotomy, no intra-abdominal disease was found and he was classified as Stage II A. He was then treated with radiation therapy to his neck and mediastinum.

After completion of his therapy, the patient did well until August, 1977 when he reentered the hospital with an upper gastrointestinal hemorrhage. He was felt to have a bleeding duodenal ulcer. He underwent subtotal gastrectomy with Billroth II reconstruction. Due to severe abdominal adhesions secondary to his staging laparotomy, a vagotomy could not be performed. The duodenal ulcer itself was not actively bleeding at laparotomy and was not resected because of the immediate proximity to the ampulla of Vater.

The patient's postoperative course was uncomplicated for the first week. On the seventh postoperative day, a recurrent upper gastrointestinal hemorrhage developed and required transfusion with four units of blood. He was then transferred to our institution.

There was no evidence of gastrointestinal bleeding at his admission and his hemoglobin level was stable at 10 gm/100 ml. The patient was observed in the intensive care unit and treatment consisting of an antacid (Maalox)® and cimetidine was begun. Our diagnosis was that of possible recurrent bleeding from the duodenal ulcer or from the gastro-jejunostomy suture line. The following day, a hypaque upper gastrointestinal series was performed. It revealed an intact subtotal gastrectomy with a functioning gastrojejunostomy. Gastroscopy was then done and a small amount of blood was discovered coming from the afferent limb. The patient's condition remained stable for the next 24 hours.

On the third day after his transfer, a massive upper gastrointestinal hemorrhage occurred. An attempt was made to control the bleeding nonoperatively by using iced saline lavage, introgastric levarterenol bitartrate (Levophed) and, finally intravenous vasopressin (Pitressin) (.3 units per minute).[8] Profuse bleeding continued and required four units of blood. At no time did the blood pressure fall below 90-100 systolic. The patient was continuously observed by using a pulmonary artery catheter and an arterial monitor.

A right femoral selective arteriogram then revealed massive bleeding from the gastroduodenal artery (Figs. 1 & 2). The artery was embolized with an end-hole catheter and an absorbable gelatin sponge (Gelfoam®).[9] Approximately ten 2 mm × 5 mm fragments were used. At no time was the catheter seen to migrate. Despite these attempts, the artery continued to bleed into the gastrointestinal tract.

Because it was felt that an embolic occlusion was no longer feasible, the patient was taken immediately to the operating room for an exploratory celiotomy. A catheter was inserted in the common bile duct and through the ampulla of Vater to avoid injury because of the proximity of the ulcer to the ampulla. On opening the duodenum, a freely bleeding duodenal ulcer was

This is a case report in which hepatic artery thrombosis and liver infarction followed therapeutic embolization of the gastroduodenal artery in a patient with a bleeding duodenal ulcer.

The authors are from the Departments of Surgery and Radiology, St. Mary's Health Center and the Department of Surgery, St. Louis University School of Medicine.

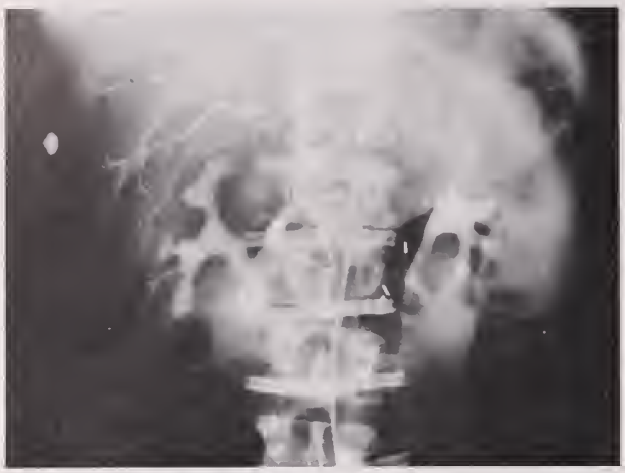


Fig. 1 Selective catheterization of the gastroduodenal artery. Notice free flow of contrast material into the duodenum.

encountered and was oversewn without difficulty. No further bleeding was noted. At no time during the procedure was the blood pressure below 80 systolic. The liver was normal in appearance.

Postoperatively, there was no further bleeding. The blood pressure and blood gases were completely normal. The patient had little abdominal pain. On the second postoperative day, his temperature rose to 104° F. A chest x-ray and blood gases were again found to be normal. The white blood cell count was 32,000/cu mm with a left shift.

On the third postoperative day, there was increasing abdominal tenderness and decreased T-tube drainage. We suspected that the T-tube may have become displaced so a T-tube cholangiogram was done (Figs. 3 & 4) which was normal. There were multiple gas pockets superimposing the liver and suggesting a gas-forming infection. Massive doses of penicillin and gentamicin were added to the postoperative regimen of cephalothin.

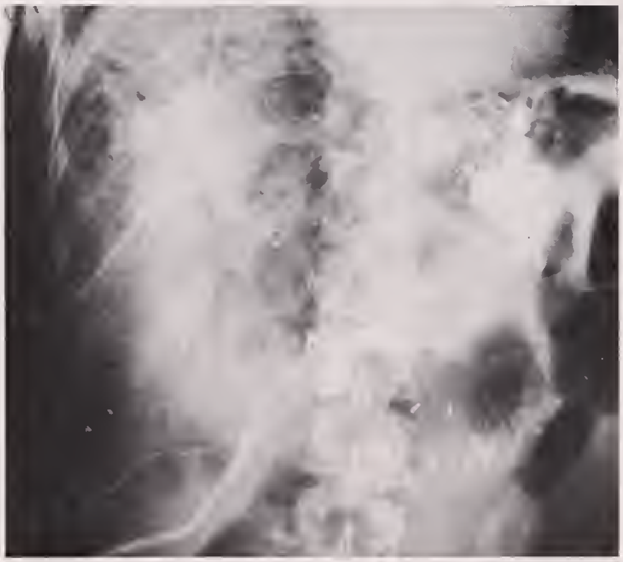


Fig. 3 Flat plate of abdomen. Notice diffuse nature of intrahepatic gas secondary to E. Coli.

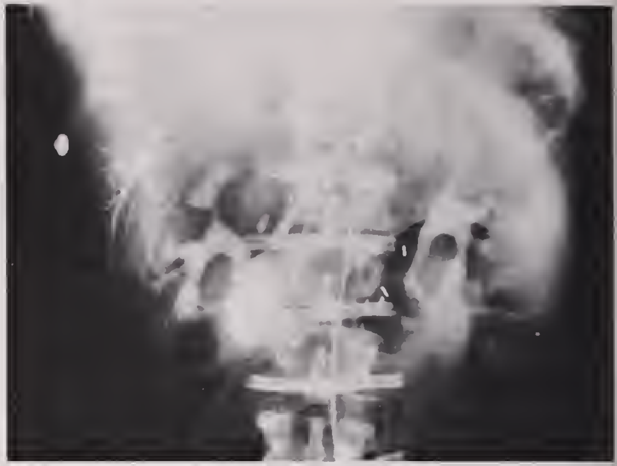
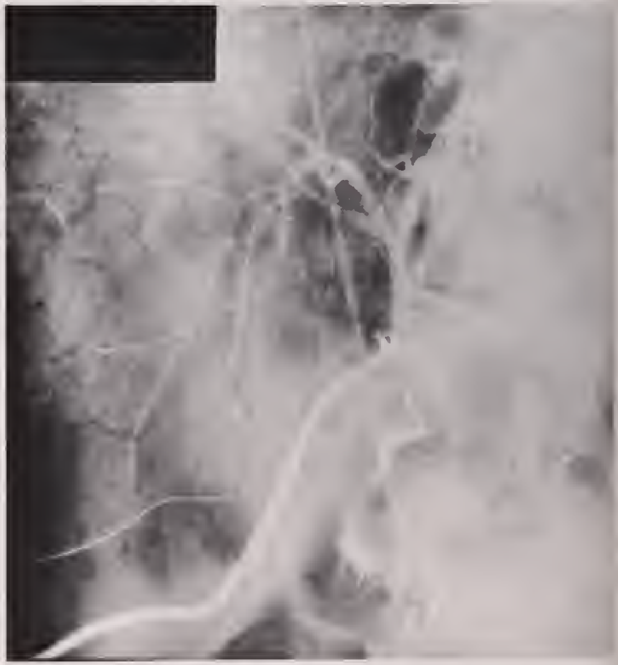


Fig. 2 Following numerous attempts at embolization, contrast still flows freely into the duodenum. Notice catheter has not changed position.

Despite attempts at support, the patient progressed into septic shock and died on the following day. A postmortem examination revealed complete hepatic artery thrombosis, massive hepatic necrosis and moderate generalized arteriosclerosis. No surgical injury to the hepatic artery was found. The portal vein was noted to be patent. Cultures of the liver grew out heavy E. Coli sensitive to the antibiotics he had received.

DISCUSSION

The use of arterial embolization for bleeding from visceral arteries is becoming increasingly more frequent as radiologists are trained in the technique. Embolization has been used in the



[redacted]

Fig. 4 T-tube cholangiogram shows placement of T-tube in the common bile duct.

treatment of bleeding gastric ulcers, infected iliac artery suture lines, Mallory-Weiss tears, duodenal ulcers, splenic trauma, renal trauma, hepatic trauma, internal mammary artery trauma, retroperitoneal trauma and gastrointestinal varices.[9-17]

Fatal complications after embolization are rare. Death in most patients, in the above mentioned reports was usually related to the underlying disease process. As would be expected, the major complication of catheter embolization is related to ischemia and necrosis. Prochaska *et al* describe a case in which embolization of the left gastric artery resulted in necrosis of the mid-lesser curvature of the stomach.[16] Other authors have described ischemia of the duodenal mucosa and possible full thickness duodenal necrosis. Transient ischemia of the kidney has also been described.[10]

Obviously, necrosis resulting from embolization will occur only in a system without adequate collateral formation. If one considers the hepatic artery, an end artery, this would adequately explain why necrosis developed in our patient.[18] Other sources have proven in animal or cadaver models that the liver may obtain oxygen through collaterals from the diaphragmatic, intercostal, lumbar, adrenal and renal arteries.[19] A final method of oxygen supply to the dearterialized liver may be via the portal vein which possesses a greater oxygen concentation than systemic venous blood.[20] It would appear, therefore, that necrosis of the liver in the absence of associated insult is rare. Hepatic artery ligation, in fact, has been used to deal with exsanguinating hepatic trauma and hepatocellular carcinoma.[21]

A number of factors probably determined the death of this patient. The first we must consider is that of hypotension contributing to a generalized impaired oxygen flow to the liver with resulting injury. At no time was the systemic pressure recorded below 80 mm Hg systolic in the perioperative period. On postmortem examination, no other arteries were noted to be thrombosed. A second factor was the patient's moderate arteriosclerosis, which may have decreased the previously mentioned collateral circulation to the liver. A possible third mechanism was the use of intravenous pitressin, which has been shown to transiently reduce the arterial flow to the liver. However, no decrease in oxygen uptake has ever been proven.[7] Another possible cause would be that of arterial injury during the operation.[19] On postmortem examination, no surgical trauma to the hepatic vasculature was seen.

Complications of intra-arterial catheterization are well recognized. In this case, manipulation of the catheter in the hepatic artery may have caused intimal damage resulting in occlusion. Other possibilities include partial embolization of Gelfoam to the liver resulting in retrograde thrombosis. Careful evaluation of the hepatic artery revealed no evidence of intimal damage attributable to the catheter and no Gelfoam was found on microscopic examination of the thrombus in the hepatic artery. Gelfoam, however, was found in the gastroduodenal artery. Finally and most likely, a generalized vasospastic phenomenon resulting from catheter placement and contrast injection into the peri-hepatic arterial system may have occurred. All of these factors may have contributed in part to the patient's ensuing course.

The use of arterial embolization may have contributed to the resultant thrombosis of the hepatic artery in this patient. High-dose antibiotics probably should be given if arterial embolization in or around the hepatic artery is used, especially if surgical manipulation of the biliary system is a possibility.

REFERENCES

1. Baum, S. and Nussbaum, M.: The Control of Gastrointestinal Hemorrhage by Selective Mesenteric Arterial Infusion of Vasopressin. Radiology 98:497-505, Mar. 1971.

2. Rosch, J., Dotter, C. T. and Rose, R. W.: Selective Arterial Infusion of Vasoconstrictors in Acute Gastrointestinal Bleeding. Radiology 98:27-36, Apr. 1971.

3. Athanasoulis, C. A., Baum, S., Waltman, A. V., Rung, E. J., Imbembo, A. and Vander Salm, T. J.: Control of Acute Gastric Mucosal Hemorrhage. N. Engl. J. Med. 290:597-603, Mar. 1974.

4. Rosch, J., Dotter, C. T. and Broun, M. J.: Selective Arterial Embolization: A New Method for Control of Acute Gastrointestinal Bleeding. Radiology 102:303-306, Feb. 1972.

5. Rosch, J., Dotter, C. T. and Antonovic, R.: Selective Vasoconstrictor Infusion in the Management of Arterio-Capillary Gastrointestinal Hemorrhage. Am. J. Roentgenol. Radium Ther. Nuclear Med. 116:279-288, 1972.

6. White, R. I., Giargiana, F. A. and Bell, W.: Bleeding Duodenal Ulcer Control: Selective Arterial Embolization With Autologous Blood Clot. J.A.M.A. 229:546-548, July, 1974.

7. Katzen, B. T., Rossi, P., Passariello, R. and Simonetti, G.: Transcatheter Therapeutic Arterial Embolization. Radiology 120:523-531, Sept., 1976.

8. Johnson, W. C., Widrich, W. C., Ansell, J. E., Robbins, A. H. and Nabseth, D. C.: Control of Bleeding Varices by Vasopressin: A Prospective Randomized Study. Am. Surg. 186:369-376, Sept., 1977.

9. Tadavarthy, S. M., Knight, L., Ovitt, T. W., Snyder, C. and Amplatz, K.: Therapeutic Transcatheter Arterial Embolization. Radiology 111:13-16, July, 1974.

10. Bookstein, J. J., Chlosta, E. M., Foley, D. and Walter, J.: Transcatheter Hemostasis of Gastrointestinal Bleeding Using Modified Autogenous Clot. Radiology 113:277-285, Nov., 1974.

11. Katzen, B. T. and McSweeney, J.: Therapeutic Transluminal Arterial Embolization for Bleeding in the Upper Part of the Gastrointestinal Tract. Surg. Gynec. & Obst. 141:523-527, Oct., 1975.

12. Reuter, S. R., Chuang, U. P. and Bree, R. L.: Selective Arterial Embolization for Control of Massive Upper Gastrointestinal Bleeding. Am. J. Roentgenol. 125:119-126, Sept., 1975.

13. Rubin, B. E. and Katzen, B. T.: Selective Hepatic Artery Embolization to Control Massive Hepatic Hemorrhage After Trauma. Am. J. Roentgenol. 129:253-256, Aug., 1977.

14. Jander, H. P., Laws, H. L., Koguth, M. S. and Mikas, A. A.: Emergency Embolization in Blunt Hepatic Trauma. Am. J. Roentgenol. 129:249-252, Aug., 1977.

15. Viamonte, M., Pereiras, R., Russell, E., LePage, J. and Hutson, D.: Transhepatic Obliteration of Gastroesophageal Varices: Results in Acute and Nonacute Bleeders. Am. J. Roentgenol. 129:237-241, Aug., 1977.

16. Prochaska, J. M., Flye, M. W. and Johnsrude, I. S.: Left Gastric Embolization for Control of Gastric Bleeding: A Complication. Radiology 107:521-522, June, 1973.

(Continued on page 496)

JAMIL A. FAYEZ, M.D., JAMES R. SOWERS, M.D., SUSAN BLANCHARD,
BETTY Y. FINNIE *and* TERRY MORRIS, M.D., *Kansas City*

Update on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas

Case Reports

THERE ARE NO COMPLETELY SATISFACTORY DATA available to determine the incidence of prolactin-secreting tumors in women with amenorrhea or galactorrhea. Studies performed in the past underestimated the frequency of these tumors since neither polytomography nor serum prolactin levels were used to screen large numbers of women with amenorrhea or galactorrhea. In recent studies, pituitary tumors have been estimated to comprise approximately 10% of all intracranial tumors; of these, at least 30% are associated with hypersecretion of prolactin.[1] Keye *et al*[2] found that 18% of women with amenorrhea or galactorrhea had prolactin-secreting adenomas while 50% of patients with galactorrhea and amenorrhea had prolactin-secreting tumors.

Historically, patients with pituitary tumors have come to medical attention because of symptoms resulting from tumor expansion, such as headache, and visual field changes or hormonal consequences of amenorrheas, hyperprolactinemia or acromegaly.[3] Recently, there has been increased awareness of small pituitary adenomas that secrete prolactin and result in early symptoms of amenorrhea or galactorrhea or both.[4] The traditional methods of pituitary evaluation, such as conventional skull x-rays and visual fields, testing failed to detect early pituitary tumors.[2] New hormonal assay and recent refined radiography techniques have permitted these neoplasms to be diagnosed early and often before significant extension of the tumor.

This report describes two patients with galactorrhea-amenorrhea syndrome who were found to have pituitary adenomas. The early detection, the preoperative and postoperative evaluation, and the management of these tumors are discussed.

This study reports two women with hyperprolactinemia who were evaluated and found to have pituitary adenomas. Newer methods utilizing radial immunoassay determinations of specific pituitary hormones plus the technique of specialized x-ray polytomography have permitted the early diagnosis of these neoplasms and allowed corrective surgical treatment.

Dr. Fayez is Professor, University of Missouri-Kansas City School of Medicine (UMKC) and Chief, Section of Reproductive Endocrinology, Department of Obstetrics and Gynecology, Truman Medical Center. Dr. Sowers is Associate Professor at UMKC and Chief, Endocrine Research Laboratory, Truman Medical Center. Ms. Blanchard is from the UMKC Endocrine Laboratory. Ms. Betty Y. Finnie is a Final Year Medical Student at UMKC. Dr. Morris is Chief Resident, Department of Obstetrics, Truman Medical Center.

CASE REPORTS

Case #1 A 53-year-old white woman, Gravida III, Para III, had her last normal menstrual period four years prior to her first visit to our reproductive endocrine clinic. She came with a complaint of bilateral milky breast discharge of one-year duration. Menarche started at the age of 13, and periods were regular until she became menopausal at the age of 49. Her past and family history were uneventful. A physical examination revealed coarseness of facial features with enlargement of the skull, hands and feet. The patient, when questioned, admitted her recent awareness of these changes. Milky fluid was easily expressed from both breasts. Skull x-rays demonstrated slight asymmetry of the sellar floor. Hypocycloidal polytomography demonstrated bulging and erosion of the posterior sellar floor. Clinical data appear in Table 1. Results of routine laboratory tests were within normal range. Baseline serum prolactin (PRL), growth hormone (GH), follicle stimulating hormone (FSH) and luteinizing hormone (LH) were elevated. Results of thyroid function tests were normal (Table 2).

Preoperative and postoperative dynamic pituitary function tests were performed (Table 3). CAT scan, pneumoencephalography and bilateral carotid angiography performed a week prior to surgery showed no extrasellar extension. A microsurgical transphenoidal pituitary adenomectomy was performed using a Zeiss operating microscope with lateral fluoroscopic monitoring. The postoperative course was complicated by transient diabetes insipidus. The size of the tumor was estimated to be 13 mm in diameter. The pathology report described the tumor as acidophilic type. Galactorrhea ceased three weeks postoperatively. A year after the excision of the tumor, the patient's features are progressively improving.

Case #2 A 36-year-old white woman, Gravida VI, Para VI, had her last normal menstrual period ten years ago. She was referred to our reproductive endocrinology clinic because of amenorrhea and galactorrhea. Menarche started at the age of 12 with menstrual periods always normal. Her six deliveries were spontaneous and uneventful. After her last childbirth ten years ago, she began taking a combination oral contraceptive steroid pill. Eighteen months later, she discontinued the pill but her menses never resumed. A year later, she noticed milky discharge coming from both breasts. At that time, she decided to seek medical advice. She visited different physicians who performed a dilation and curettage (D&C) and laparoscopy and gave her different medications. Amenorrhea and galactorrhea persisted, however.

During her first visit to our clinic three years ago, results of a physical examination (including pelvic) were found to be normal with the exception of the milky discharge from both breasts. These data are summarized in Table 1. Thyroid function test results were normal; FSH and LH levels were low normal, but prolactin was elevated, 56 ng/ml, normal for female is <30 ng/ml. Skull x-rays and visual fields were normal. Progesterone withdrawal bleeding test was negative.

The patient was advised to visit our clinic every six months to have blood drawn for prolactin measurement and for routine skull x-rays and visual field testing. Prolactin had remained elevated; the highest level was 110 ng/ml. X-rays and visual fields were always normal. One year ago, prolactin was 1400 ng/ml; routine x-rays revealed the possibility of an enlarged, double-floored sella turcica.

At this time, the polytomography machine became available to us and hypocycloidal polytomography revealed minimal erosion of the patient's anterolateral sellar floor.

Dynamic pituitary function was determined with prolactin suppression and stimulation and growth hormone stimulation tests. Also, the evaluation of gonadotropin, thyroid stimulating hormone (TSH) and adrenocorticotropic hormone (ACTH) reserve tests were performed. These results are summarized in Table 3. A CAT scan, pneumoencephalography, bilateral carotid angiography performed preoperatively showed no extrasellar extension. The patient had microsurgical transphenoidal adenomectomy. The intraoperative and postoperative course was uneventful. Ninety days postoperatively, the same dynamic hormonal tests were repeated. All were normal with the exception of the slightly elevated prolactin level.

Galactorrhea disappeared within 12 weeks after surgery and menses were resumed seven months later.

The neurosurgeon estimated the size of the adenoma as 11 mm in diameter. The pathology report described the tissue as chromophobe adenoma.

Materials and Methods

Blood was drawn from both patients for baseline measurements of the following hormones: T_4, T_3 resin uptake (T_3RU), cortisol, prolactin, FSH, LH, GH and TSH. For the dynamic function tests, an indwelling antecubital venous catheter was placed in each patient and blood was drawn at −15, 0, 15, 30, 50, 120 and 180 minutes. The zero time indicates the time the stimulating or suppressing agents were administered. Five hundred milligrams of L-DOPA orally were used for the suppression of prolactin. For the stimulation of GH, intravenous (IV) 100 μg of gonadotropin releasing hormone (GnRH) was used for gonadotropin stimulation. Five hundred milligrams of thyrotropin-releasing hormone (TRH) was used intravenously for the stimulation of PRL and TSH secretion. Five 250 mg metyrapone tablets were given orally before dinner and at bedtime to test the ACTH reserve.

T_4 and cortisol were assayed by a competitive protein-binding radioassay. Pituitary hormones were determined by radioimmunoassay. Results are shown in Tables 2 and 3.

In the patient with acromegaly (Patient #1), GH stimulation and suppression were tested by insulin-induced hypoglycemia and by oral glucose-induced hyperglycemia, respectively. No response was obtained.

Discussion

This study reports two women with hyperprolactinemia who were evaluated and found to have pituitary adenomas. The first patient was postmenopausal and had the physical appearance of acromegaly. This disease invariably accompanies the growth hormone — secreting pituitary adenomas of acidophilic or chromophobic cell type. The physical appearance of acromegaly is well known, yet the diagnosis is often delayed because the progressive facial and acral changes are so insidious. This patient was seen because of galactorrhea and did not mention any changes in her features until she was questioned. It was noticed that there was coarseness of facial features with enlargement of the skull, hands and feet. Other manifestations of the disease were absent. They included hypertension, diabetes mellitus and cardiomyopathy.

TABLE 1

HISTORICAL AND CLINICAL DATA OF TWO WOMEN WITH AMENORRHEA ASSOCIATED WITH HYPERPROLACTINEMIA DUE TO PITUITARY ADENOMAS

Case No.	Age	Parity	Amenorrhea (Months)	Galactorrhea (Months)	Contraceptive Pills (Months)	Sella Turcia		Visual Fields	Treatment	Post-Treatment Outcome	
						PLAIN X-RAY	TOMOGRAPHY			MENSES	GALACTORRHEA
1	53	3	48	12	None	Abnormal	Abnormal	Normal	Transphenoidal adenomectomy	Not resumed	Disappeared
2	36	6	120	108	18	Abnormal	Abnormal	Normal	Transphenoidal adenomectomy	Resumed	Disappeared

TABLE 2

BASE LINE LABORATORY DATA IN TWO PATIENTS WITH PITUITARY TUMORS ASSOCIATED WITH AMENORRHEA AND HYPERPROLACTINEMIA

Case No. NORMAL VALUES	FSH 1-10 mIu/ml	LH 1-10 mIu/ml	PRL <30 ng/ml	GH <6 ng/ml	TSH 3-10 mIu/ml	T_4 4.6-10.7 µg/100 ml	T_3RU 25%-35%	Cortisol 30-160 ng/ml	
								AM	PM
1	37.5	18.8	240	17.4	8.6	8.7	30%	105	45
2	5.6	4.8	1140	4.0	6.0	8.5	27%	100	40

TABLE 3*

PITUITARY FUNCTION TESTS IN TWO PATIENTS WITH PITUITARY ADENOMAS ASSOCIATED WITH AMENORRHEA AND HYPERPROLACTINEMIA

Case No.	Prolactin n = < 30 ng/ml			Gonadotropin n = 1-10 mIu/ml				Growth Hormone n = <6 ng/ml		TSH n = 3-10 mIu/ml		ACTH			
				FSH n = 1-10 mIu/ml		LH n = 1-10 mIu/ml						Compound S†		Cortisol 30-160 ng/ml	
	Base-line	After L-DOPA	After TRH	Base-line	GnRH Stim.	Base-line	GnRH Stim.	Base-line	After L-DOPA	Base-line	After TRH	Base-line	Metyra-pone	Base-line	Metyra-pone
1	228	200	250	37.8	33.4	22.5	25.0	16.8	15.4	7.0	27.0	4.5	105	50	20
2	1400	580	1200	3.4	16.5	3.3	7.2	4.8	5.2	5.8	27.0	1.1	95	60	30

* Results show that maximal response to stimulation or suppression.

† Less than 8.0 ng/ml is normal; greater than 80.0 ng/ml after metyrapone intake the preceding night is normal.

Immunoassay of serum growth hormone provides the most sensitive indicator of acromegaly even though the degree of growth hormone elevation does not always correlate with the severity of the disease. The magnitude of GH excess varies from patient to patient and the circulating levels range from 5-20 ng/ml to over 1,000 ng/ml.[5] The diagnosis of excessive hormone production in this patient was entertained because acromegalic manifestations were obvious; GH baseline levels were about threefold the normal. This high level failed to suppress in response to hyperglycemia; GH levels in normal individuals generally decrease to less than 5 ng/ml during the glucose tolerance test.[6] The lack of response to hyperglycemia, to insulin-induced hypoglycemia and to L-DOPA suggested the existence of an autonomous growth hormone-secreting adenoma.

The main complaint of the other patient (Patient #2) was secondary amenorrhea and galactorrhea. Serum prolactin screening tests showed hyperprolactinemia. Hyperprolactinemia with or without galactorrhea arises from multiple factors. Such factors include suckling, a variety of drugs, hypothyroidism and, most important, pituitary tumors. The latter is dangerous as it carries with it the endocrine, neurologic and ophthalmologic liabilities that are potentially disabling.

In the past, the diagnosis of these tumors depended on the radiologic abnormalities in the sella turcica. Since the amenorrhea-galactorrhea syndrome may precede the radiologic demonstration of a pituitary adenoma via classical skull films by ten years or more, newer techniques were sought for their early detection. The recent development of a sensitive and specific radioimmunoassay for human prolactin, coupled with the technique of hypocycloidal polytomography, has made the early identification of patients with prolactin-secreting pituitary microadenomas possible.

Several reports considered any degree of hyperprolactinemia as suggestive of the presence of a pituitary tumor and recommended screening all women with amenorrhea or galactorrhea or both for the magnitude of plasma prolactin elevation.[7] The utility of hypocycloidal polytomography in the early diagnosis of microadenoma has been documented.[8] As a result of these reports, we no longer consider routine skull x-rays or routine visual field examinations as essential tools in the diagnosis of pituitary adenomas. Our initial screening procedure consists of serum prolactin determination followed by hypocycloidal polytomography in women with hyperprolactinemia.

In the postmenopausal acromegalic patient, the increased secretion of GH and prolactin are due to the presence of pituitary adenoma, while increased levels of gonadotropin are due to the lack of the negative feedback mechanism on the hypothalamic-pituitary axis. The normal baseline values in these two patients with macroadenomas, including TSH, T_4, T_3 and cortisol, suggest that the tumor was still too small to cause damage to the neighboring trophic cells.

Dynamic testing of the hypothalamic-pituitary axis is *usually useful* in evaluating patients with large neoplasms where trophic hormone compromise often exists. Since only a few trophic cells are required to demonstrate intact dynamic pituitary function, dynamic testing for pituitary microadenomas is still inconclusive. To study the diagnostic and prognostic values of these tests, we initiated a number of tests on these two patients. They included prolactin suppression and stimulation by L-DOPA and TRH, respectively; TSH response to TRH; GH response to L-DOPA; the GnRH stimulation test; and the ACTH reserve test. Each of these tests requires a responsive hypothalamus as well as a responsive pituitary. An examination of the results of these tests indicates that although they are confirmative, they are certainly not diagnostic.

The two patients underwent transphenoidal excision of their pituitary adenomas because it was felt that they were large enough to warrant resection. Both demonstrated radiologic changes on plane x-ray of the skull signaling their progressive growth. Preoperative pneumoencephalography, computerized axial tomography (CAT) and carotid arteriography were performed on both patients and were normal. Pneumoencephalography was done to exclude the presence of an empty sella and to rule out any degree of suprasellar extension. CAT was used as an adjunct to pneumoencephalography to evaluate suprasellar extension. Carotid arteriography was performed to delineate the sellar anatomy and to exclude the presence of an aneurysm.

Ninety days after the operation, hormonal levels were normal in both patients except for a slightly elevated PRL in Patient #2 (38 ng/ml). In Patient #1, the acromegalic features improved, galactorrhea disappeared and amenorrhea persisted because she was postmenopausal. The high levels of T4 and cortisol immediately after surgery verified the adequate response of the remaining pituitary cells to stress. Therefore, no supplemental thyroid hormones or glucocorticoids were administered.

As a small prolactin-secreting adenoma may not become evident on initial testing, continued vigilence is important and periodic radiologic and endocrine evaluation should be made in all patients with amenorrhea and hyperprolactinemia. Serum prolactin should be measured every six months and, if elevated, tomography is indicated.

As ovulation does not usually occur with even mild hyperprolactinemia, surgical removal of a prolactin secreting adenoma is indicated for patients who desire pregnancy. Although bromocriptine is capable of restoring normal menstrual cyclicity which may result in pregnancy in hyperprolactinemic patients with small microadenomas, the surgical approach is preferable in patients desiring pregnancy. Excision of the tumor prior to pregnancy enables the patient t avoid the possible catastrophic consequences, such as tumor hemorrhage and apoplexy, necrosi or even pressure on the neighboring structure with its detrimental sequelae.

References

1. Frantz, A. G. and Suh, H. K.: L-dopa and the Control of Prolacti Secretion. Adv. Neurol. 5:447-456, 1974.
2. Keye, W. R., Chang, J. and Jaffe, R. B.: Prolactin Secreting Pituitar Adenomas in Women With Amenorrhea or Galactorrhea. Obstet. Gynecol Survey 32:727-738, 1977.
3. Downing, T. A., Engel, T. and Betz, G.: Pituitary Tumors in Women Obstet. Gynecol. 42:182-185, 1973.
4. Jacobs, H. S.: Prolactin and Amenorrhea. New Engl. J. Med. 295:954 956, 1976.
5. Yen, S. S. and Jaffe, R. B.: Reproductive Endocrinology, 1st edition Philadelphia, W. B. Saunders, 1978, page 361.
6. Lawrence, A. M., Goldfine, I. D. and Kirsteins, L.: Growth Hormon Dynamics in Acromegaly. J. Clin. Endocrinol. Metab. 31:239, 1970.
7. Wiebe, R. H., Hammond, C. B. and Handwerger, S.: Prolactin Secreting Pituitary Microadenoma: Detection and Evaluation. Fertil. Steril 29:282-286, 1978.
8. Vezina, J. L. and Sutton, T. J.: Prolactin-Secreting Pituitary Mi croadenomas, Roentgenologic Diagnosis. Amer. J. Roentgenol. 120:46, 1974.

Reprints: Jamil A. Fayez, M.D.
Truman Medical Center
2301 Holmes St.
Kansas City, Mo. 64108

Massive Hepatic Necrosis

(Continued from page 491)

17. Brookstein, J. J. and Galstein, H. M.: Successful Management of Post-Biopsy Arteriovenous Fistula With Selective Arterial Embolization. Radiology 109:535, 1973.
18. Michels, N. A.: Newer Anatomy of Liver-Variant Blood Supply and Collateral Circulation. J.A.M.A. 172:125, 1960.
19. Brittain, R. S., Marchioro, T. L., Hermann, G., Waddell, W. R., and Starzl, T. E.: Accidental Hepatic Artery Ligation in Humans. Am. J. Surg. 107:822-832, June, 1964.
20. Bradley, S. E., Smythe, C. M., Fitzpatrick, H. F. and Blakemore, A. H.: The Effect of a Portacaval Shunt on Estimated Hepatic Blood Flow and Oxygen Uptake in Cirrhosis. J. Clin. Invest. 32:526, 1953.
21. Fortner, J. G., Mulcare, R. J., Solis, A., Watson, R. C. and Goldbe R. B.: Treatment of Primary and Secondary Liver Cancer by Hepatic Arter Ligation and Infusion Chemotherapy. Ann. Surg. 178:162-172, 1973.

Reprints: Theodore J. Dubuque, Jr., M.D.
Dept. of Surgery
St. Mary's Health Center
6420 Clayton Rd.
St. Louis, Mo.

A medical conference designed to help physicians learn how to evaluate the effects of air pollution on the health of their patients will be held on September 27-28 in Denver. Sponsors are the American Medical Association and the Colorado Medical Society.

Certain physical conditions, especially heart and respiratory conditions, can be aggravated by pollutants in the air. But the physician often has difficulty in verifying the cause of the illness in the individual patient. Symptoms of these illnesses — shortness of breath, chest pains, fatigue — may also be due to other causes.

The conference program will include lectures, panel discussions, demonstrations and a video tape presentation featuring pollution-sensitive patients and their physicians.

Sessions will be held in the Writers' Manor Hotel, Denver. Further information on the conference is available from the American Medical Association, Department of Environmental, Public and Occupational Health, 535 N. Dearborn St., Chicago, IL 60610, and from the Colorado Medical Society at 1601 E. 19th Ave., Denver, CO 80211.

Professional Liability Insurance for Missouri Physicians

BY

Medical Defense Associates, Ltd.

ST. LOUIS/KANSAS CITY RATES

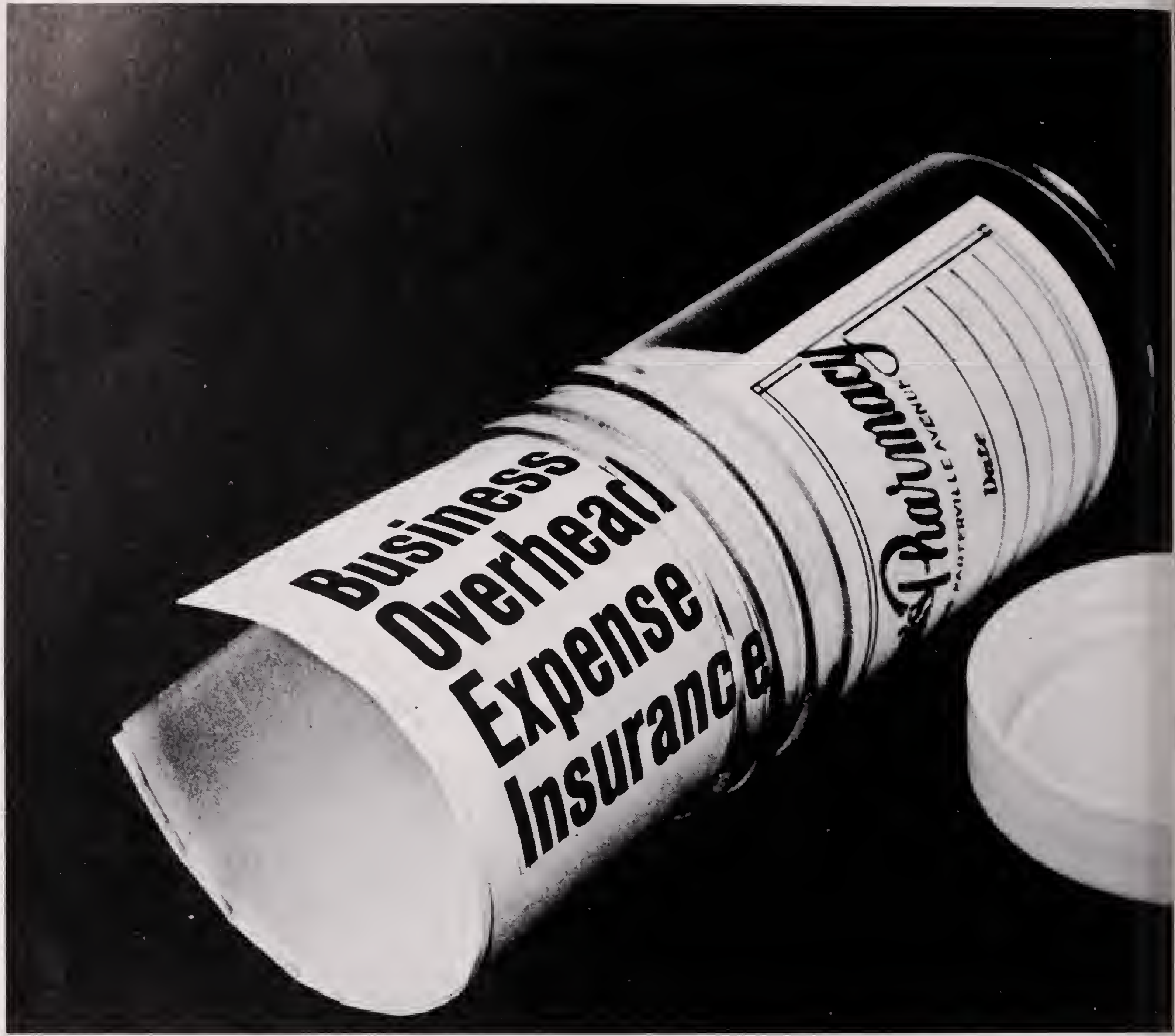
I No Surgery
II Minor Surgery
IIID Urologist, Opthalmology, Proctologist
IVB General Surgeon
IVA Otolaryngologist, OBGYN, Plastic
IVG Thoracic, Neuro, Orthopedists
IVH Anesthesiologists

CLASS	100/300		200/600		500/1,000		1,000/1,000		1,000/2,000	
	1st yr.	Renewal	1st yr.	Renewal	First 3 yrs.	Thereafter	First 3 yrs.	Thereafter	First 3 yrs.	Thereafter
I A	440	220	594	374	514	440	954	880	1,130	1,056
II A	840	420	983	563	980	840	1,400	1,260	1,652	1,512
III D	2,880	1,440	3,744	2,304	3,360	2,880	4,080	3,600	4,800	4,320
IV A	4,896	2,448	6,243	3,795	5,712	4,896	6,446	5,630	7,572	6,756
IV B	3,600	1,800	4,880	3,080	4,200	3,600	4,740	4,140	5,568	4,968
IV G	6,240	3,120	7,965	4,836	7,280	6,240	7,748	6,708	9,090	8,050
IV H	6,720	3,360	8,434	5,074	7,840	6,720	8,680	7,560	10,192	9,072

You will not be asked to make any additional non-deductible donation, join any particular society, or purchase any form of security. The rates and classifications above will give you an idea of costs although proper application must be made for final acceptance. The premium assessments are subject to adjustment based on actual claims experience.

For additional information please call or write:

MISSOURI MALPRACTICE MANAGERS, 3444-P S. Campbell, Springfield, Missouri 65807
Phone 1-800-492-7212 or (417) 883-0199



A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

President's Message

In late July, I was visited by Gary Clark, executive secretary for the State Board of Registration for the Healing Arts in Missouri. Mr. Clark handed me a document which is a draft of a proposed "Definition of the Practice of Medicine," which is being considered by the Board. The Board would like the input of the MSMA as well as the state osteopathic association.

Andrew McCanse, M.D.

By the time this piece is printed, the MSMA Executive Council and the State Board of Registration will have met and discussed the matter. At this time, the Board is working under the handicap of having no such definition of medical practice except what has been established by case law in the state. The overwhelming majority of the states do have such a definition, either by regulation or in their statutes.

We have a nursing practice act in Missouri which has separated nursing completely from the State Board of Registration for the Healing Arts. Consequently, there are nurses in the state who have set up their own independent nursing practices which are carried out under their statute. Among other things, nurses are allowed to do "assessment, nursing diagnosis, nursing care and counsel of persons who are ill, injured or experiencing alterations in normal health processes." The problem arises as to what constitutes assessment, nursing diagnosis, nursing care of the ill and injured and what constitutes medical practice. I do not pretend to have the answer and, at this time, neither does the State Board.

The situation does not stop there. Mr. Clark explained that the State Board of Registration is also considering the certification of physician assistants (PAs). According to his explanation, the Board recognizes that PAs are acknowledged in a number of states through some sort of credentialling or certifying process. Even in Missouri, there is a state provision for Emergency Medical Technicians. PAs are being used in a number of places in Missouri to carry out the orders of physicians. In those cases in which there is a complaint that the PA has rendered a disservice, there is not an expeditious way for the State Board to address the problem. After all, the PA theoretically is carrying out the orders of a physician and, therefore, is not practicing medicine without a license.

The AMA position on PAs has been that they should be supervised by physicians, but it recognizes that the physician may not be physically present at the time each service is rendered by the PA. The AMA also accredits training programs for physician extenders.

At the annual meeting of the AMA in Chicago last July, the House of Delegates called for a study and reevaluation of its position on PA programs. Part of the testimony on this resolution pointed out that the numbers of physicians now graduating from medical schools has increased so much that the need for these extenders may have changed considerably.

The MSMA is opposed to licensing or certification of physician assistants, largely because of a concern that state credentialling of PAs will eventually lead to more independent practitioners of their own craft. If the State Board does decide on certification for PAs, in all likelihood it would be under the umbrella of the State Board.

This entire problem needs to be addressed by the MSMA. I hope that all of our members will give their councilors the benefit of their thoughts on this subject.

MSMA Auxiliary

"Houses and riches are the inheritance of fathers; and a prudent wife is from the Lord."

Dear Doctor:

Do you know if your spouse is a member of your medical society auxiliary?

Membership in the auxiliary is a unique gift from our husbands, and participation in the auxiliary is what the individual wishes it to be in terms of interest and involvement. With her dues, she provides financial support for education, development of health-related programs and resources to extend the aims of the auxiliary. Remember, a membership increase is much better than a "dues increase." We extend a warm invitation to every physician's spouse to join us in the knowledge that together we can do more.

Mrs. Rudy Ruhling
President

The growing concern for the future of medicine has initiated increased interest on the part of our members. They are ready to be involved in support of their spouse's profession. The MSMA has asked the auxiliary to help in the field of legislation as well as monitoring HSAs, and we intend to be effective when asked for help.

In spite of inflation, your spouse's membership in the MSMA Auxiliary is a sound investment. Whether active or participating, now is the time to renew or become a first-time investor.

Information is available from our county auxiliary presidents, who are listed in the MSMA Membership Roster issue of Missouri Medicine, and from our Auxiliary Membership Chairman, Mrs. Vernon Jackson, 3 Staff Circle, Fulton 65251.

You can't sell it unless you tell it.

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
***Contact:* Loretta Giacoletto**

Nov. 9-11	Sixth Annual Symposium: Anesthesia and the Geriatric Patient (Marriott Hotel)
Nov. 10	Diabetes Seminar
Nov. 29-30	Update in Selected Topics in Medicine (St. Luke's Hospital)
Dec. 6-8	Allergy for the Practicing Physician
(1980)	
Jan. 26	WUMC Alumni Winter Meeting (Ixtapa, Mexico)
Jan 27-Feb. 1	Ob-GYN Conference (Keystone, Colo.)
Feb. 28-29	MKSAP V
March-May	Internal Medicine Board Review (Jewish Hospital of St. Louis)
Mar. 20-21	Rheumatology Conference
Mar. 27-28	Vascular Neurosurgery
Apr. 17-18	Seventh Annual OB-GYN Symposium
Apr. 25-26	Eye Alumni Meeting
May 3-11	Second Annual Current Concepts in Musculoskeletal Radiology and Orthopedics Meeting
May 9-10	Orthopedic Radiology
May 15-16	Neuromuscular Diseases

Kansas City Society of Ophthalmology and Otolaryngology
30306 Gillham Rd., Kansas City 64108
(816) 531-8432
***Contact:* Ron Cosens, Executive Director**

Dec. 6-7	Annual Clinical Meeting (Hilton Plaza Inn)

Ed Bixby Institute for Postgraduate Education
Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4167

Dec. 5	Current Management of Diabetes Mellitus
(1980)	
Feb. 6	Carcinoma of the Breast: Update 1980
Apr. 2	Present Status of Antibiotic Therapy
June 4	Chronic Obstructive Pulmonary Disease
Aug. 6	Rheumatic Heart Disease

University of Missouri School of Medicine Office of Continuing Education
M-233 Medical Center, Columbia 65212
(314) 882-2256
***Contact:* William D. Bradshaw, M.D.**

Oct. 26-27	Advances in Rheumatology
Nov. 16-17	M.D. Day
Nov. 29-Dec. 1	Group Relations in Health Care: A Working Conference on Authority, Responsibility and Organizations in Health Care Delivery Systems (TWA Breech Training Academy, Kansas City)
Nov. 30-Dec. 1	Advances in Trauma (Crown Center Hotel, Kansas City)
Nov. 30-Dec. 2	Group Relations in Health Care (Breech Training Academy, Overland Park, Kan.)
(1980)	
Feb. 17-21	Oncological Problems (Tamarron, Durango, CO)
Feb. 28-19	Nutritional Update
Mar. 5	Preceptor's Day
Mar. 6-7	Family Practice Update
Mar. 13-14	Medicine and Religion
Mar. 20-21	Spring Surgery Conference
Mar. 31-Apr. 1	26th Annual Urology Seminar (Crown Center, Kansas City)
Apr. 9-10	Primary Pediatrics for the Primary Physician
Apr. 18-20	Group Relations
Aug. 10-11	Third Annual Workshop in Soft Tissue Surgery

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

Nov. 1-3	Annual Fall Clinical Conference — Kansas City Southwest Clinical Society
Dec. 6-8	The Heart 1979

(Continued on next page)

Mercy-Baptist Eye Seminars
615 S. New Ballas Rd., St. Louis 63141
Contact: Richard B. Oglesby, M.D.

Oct. 21	Ninth Eye Seminar: New Techniques in Ophthalmology

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 454-2291
Contact: Ronald G. Evens, M.D., Director

City-Wide Radiology Conference

Nov. 12	Skeletal Lesion With a Fibrous Matrex
Dec. 10	Hepatobiliary Imaging With ^{99m}Tc-HIDA
(1980)	
Jan. 14	Conference at St. Louis University
Feb. 11	Pediatric Radiology
Mar. 10	CT of the Thorax-Updated
May 12	Parenchymal Liver Disease — Evaluation With Computed Tomography

---

DePaul Community Health Center
12303 DePaul Dr., Bridgeton 63044
(314) 344-6262
Contact: Medical Director's Office

Nov. 7	Hematology-Oncology Update (DePaul Division Auditorium)

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000
Contact: David S. Sneid, M.D., Director of Medic Education

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surger Seminar 4:00 PM — Surgical Rounds
First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortalit Conference 10:30 AM — Surgical Grand Rounds
Every Tues.	9:00 AM Medicine Staff Conference (Except second Tuesday of eacl month)

Baptist Memorial Hospital
Medical Staff Office
6601 Rockhill Rd., Kansas City 64131
(816) 942-7200
Contact: Forrest H. Kendall, Jr., M.D., (816) 942-720

Oct. 24	Early Identification and Management of Ear Problems in Children (Curry Education Center)

VISION TESTER
BY Titmus

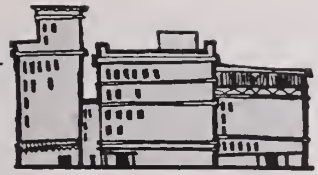
This professional model tests vision for:

preschool & illiterate children
primary grade children
older children & adults
FAA examinations

to arrange a demonstration in your office contact your local Goetze-Niemer salesman or call

The GOETZE-NIEMER Co.

1701 Brooklyn, K.C., MO. 816-231-1900
serving the Midwest since 1884



NEWS

From the Medical Schools

JNIVERSITY OF MISSOURI-COLUMBIA

Hazel J. Scott, Ph.D., has assumed responıbilities as assistant dean of the School of Mediine for student affairs.

Dr. Scott has been staff associate and assistant rofessor in psychiatry and behavioral science at he Peoria Branch, of Illinois School of Medicine ır the past four years.

Dr. Scott received a bachelor of science degree ı elementary education from Southern Illinois Jniversity, Carbondale, in 1964 and an advanced ertificate in education (in guidance and counselıg) from the University of Illinois in 1967. Her octorate in educational psychology was awarded ı 1972 from SIU.

After three years as an elementary school eacher in Cakokia, Ill., she became an advisor to igh school students participating in an Upward ound Program at the University of Illinois. Her rofessional career also has included counseling ith elementary students, consulting with parnts and teachers, coordinating remedial and esting programs.

In 1972 Dr. Scott became a staff psychologist ır the student counseling service at Illinois State Jniversity at Normal. She spent the next two ears as a counseling psychologist at Bradley Uniersity.

Since 1975, her responsibilities at the Peoria chool of Medicine have included designing, deeloping and implementing a formal programıatic, educational effort in a community health onsortium. As an assistant professor, she particiated in the second and third-year segment of the urriculum by teaching aspects of Introduction to ıe Patient and in the Psychiatric Clerkship rotaon.

Dr. Robert W. Gaines, assistant professor of ırgery, has been elected to membership in the ediatric Orthopaedic Study Group, an independent nationwide group of orthopaedic surgeons ıterested in children's orthopaedic problems. hey are principally surgeons associated with niversity medical centers.

Acceptance by a vote of the membership means willingness to engage in ongoing study of unusual pediatric orthopaedic problems, Dr. Gaines said. Activities of the group — educational and research oriented — include yearly attendance at a national meeting with obligatory presentation of a paper. The first paper Dr. Gaines will present in Montreal next spring will concern the use of the compression system in thoracolumbar and lumbar scoliosis.

Dr. Gaines has also been elected to the American Academy for Cerebral Palsy and Developmental Medicine.

Dr. James O. Davis, professor and chairman of the Department of Physiology, became president-elect of the International Society of Hypertension when the society met in Göteborg, Sweden in June. He is internationally known for his research on the causes and treatment of high blood pressure.

During his European stay, Dr. Davis also participated in three other symposia related to hypertension. He presented papers and chaired scientific sessions at Saltsjobaden, Sweden; Glion, Switzerland; and Hannover, Germany.

UNIVERSITY OF MISSOURI-KANSAS CITY

Dr. Robert D. Conn has been named professor of medicine at the School of Medicine and will become the Edward Hashinger Chair of the Department of Medicine at Truman Medical Center. A cardiologist, Dr. Conn has been on the staff of St. Luke's Hospital in Kansas City and previously served as professor and chairman of the Department of Medicine at Southern Illinois University.

Dr. David J. Moffatt has been named chairman of the Department of Anatomy. His appointment became effective on August 15. He formerly was a member of the faculty in anatomy at the University of Iowa College of Medicine.

ST. LOUIS UNIVERSITY

David R. Challoner, M.D., dean of the School of Medicine, was elected secretary of the American Medical Association's Section on Medical Schools at the recent AMA meeting in Chicago. He will serve a two-year term.

Dr. Challoner is nationally known for his work as president of the American Federation for Clinical Research. He recently participated as a panelist on Fundamental Research Principles at the National Institute of Health.

Raymond G. Slavin, M.D., professor of internal medicine and microbiology, has been appointed to a six-year term on the board of directors of the American Board of Allergy and Immunology. It is a conjoint board of the American Board of Internal Medicine and the American Board of Pediatrics, based in Philadelphia.

Munir Ahmad, M.B.B.S., assistant professor of internal medicine, had an article published in the *Journal of Nuclear Medicine* (Vol. 20, No. 4), titled "Radionuclide Venography and Lung Scanning: Concise Communication."

Richard T. Quick, M.D., assistant professor of psychiatry, has been elected to a one-year term as president of the Eastern Missouri Psychiatric Association.

William F. Melick, M.D., clinical professor of urology, has been elected president-elect of the American Urological Association at the organization's recent meeting in New York.

Vernon W. Fischer, Ph.D., associate professor of anatomy and pathology, has been awarded a three-year, $81,446 grant from the National Institutes of Arthritis, Metabolism and Digestive Diseases to study the appearance of the smallest blood vessels in the hearts of diabetic patients. *Hendrick B. Barner*, M.D., of the Department of Surgery at St. Louis University Hospitals, is a co-investigator in the project.

Dr. Fischer's study will induce diabetes in rats in order to observe the changes in capillaries over a length of time. "We do not know how long a person has been diabetic when the disease is first detected. Consequently, we do not know how long it takes to produce changes in the blood vessels," Dr. Fischer explains.

"It is known that the capillaries in the kidney, retina and leg muscles of diabetics are altered. Little, however, is known about whether diabetes specifically affects the heart," Dr. Fischer continued. "Currently, many diabetics may be restricted from heart surgery because of the uncertainty of the condition of their small blood vessels."

Thomas F. Frawley, M.D., chairman emeritus of the Department of Internal Medicine, has been appointed to the Residency Review Committee-Internal Medicine. The committee sets and enforces standards of quality for graduate education in internal medicine and evaluates new and existing programs prior to granting official approval. It is comprised of representatives from the American Board of Internal Medicine, the Council of Medical Education and the American College of Physicians, the group which Dr. Frawley will represent.

An explanation and reaffirmation of the physician's responsibilities to hearing-deficient children and an update of the best audiological screening methods for all age groups of children are two of the primary goals of the seminar on "Early Identification and Management of Ear Problems in Children" to be presented at the Baptist Memorial Hospital in Kansas City on October 24. The meeting is accredited by the AMA, AOA, AAFP and Kansas State Board of Nursing. For additional information, contact Forrest H. Kendall, Jr., M.D., 1010 Carondelet Dr., Suite 224, Kansas City 64114.

MUNNS
MEDICAL
SUPPLY

9202 Barton Overland Park, Ks. 66214 913-492-5820

in Brief

A summary of AMA, medical & health news

merican Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

THE AMA WILL CONSTRUCT a 12-story building in Washington, D.C. just south of Thomas Circle at Vermont, L and 14th Streets. The AMA Washington Office will occupy one floor. The other floors will be rented. In announcing the building plans, AMA EVP James H. Sammons, M.D., invited other medically oriented organizations to share the facility with he expectation that the building would become a focal point for organized medicine in the capital. *The headquarters of the AMA will remain in Chicago.*

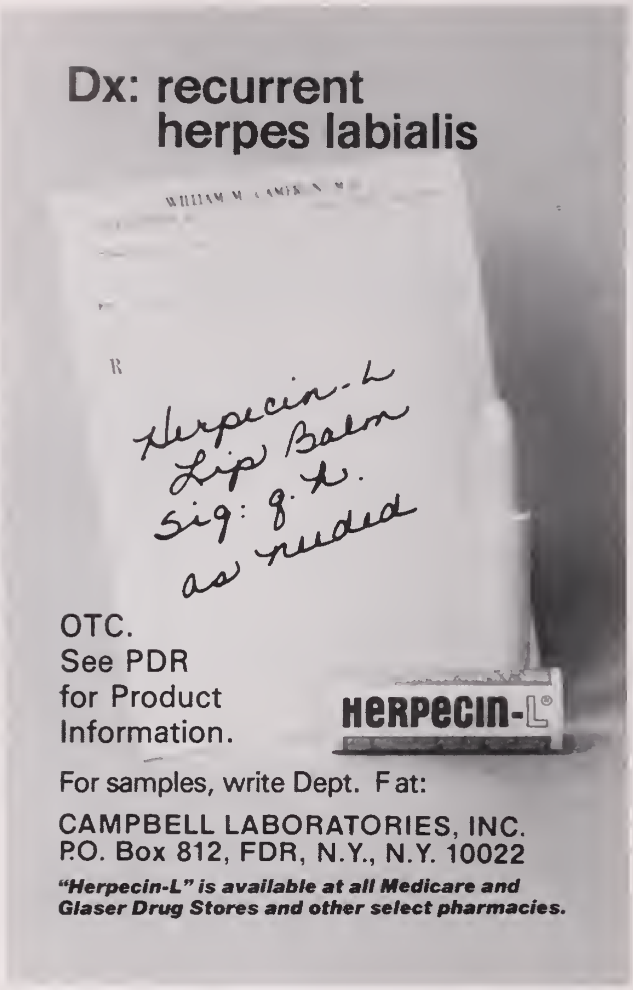
A PROGRAM TO OVERSEE the activities of egulatory agencies is long overdue, the AMA old Congress in a letter supporting the Sunset Act of 1979. The bill would make federal programs nd funding subject to mandatory review by Congress at least once every ten years. In a letter to he chairman of the House Subcommittee on the Legislative Process, the AMA said the "sunset" oncept is a needed step toward stemming the tremendous proliferation of regulatory activities n the Executive Branch of the federal government." The AMA urged that the inflationary impact of regulations be evaluated and that the least nflationary alternative be selected whenever possible.

THE AMA URGED VETO of a New York bill hat would prohibit disciplinary action against a physician or pharmacist who prescribes, dispenses or administers laetrile to a patient with written consent. In response to a request for its iews from the New York governor's office, the AMA said the Food and Drug Administration has not found laetrile to be either safe or effective and hat recent reports indicate the drug may be toxic. Enacting the bill would contradict a recent U.S. Supreme Court ruling that there are no exceptions to the FDA safety and efficacy procedure, he AMA said, and could deter patients from eeking potentially helpful treatments.

THE REWARDS THAT BALANCE the sacrifices of being a doctor's spouse were pointed out by more than 200 members of the AMA Auxiliary from Illinois, Indiana, Iowa, Michigan and Wisconsin, who comprised the audience of the Phil Donahue Show on June 28. The producers of the nationally syndicated television show requested the Auxiliary's assistance on a special program addressing the problems unique to medical marriages.

American Medical News (July 13, 1979) reported that the "star of the show was Mrs. William M. Walker, whose husband is president of Greene County (Mo.) Medical Society." Mrs. Walker is a past-president of the MSMA Auxiliary and has served as North Central Region vice-president of the AMA Auxiliary. Her co-panelists were San Diego psychiatrist Philip Baretta, Jr., M.D., who has conducted workshops on medical marriages, and Mrs. Max Savin of San Diego, who is married to a surgeon in San Diego and has participated in Dr. Baratta's workshops.

AN AMA SURVEY TEAM ASSESSED health conditions at the Los Angeles County Men's jail at the request of U.S. District Court Judge William Gray. The purpose of the assessment was to ascertain the extent to which the jail complied with AMA Standards for the Accreditation of Medical Care and Health Services in Jails. Judge Gray has been reviewing conditions at the jail because of a 1978 lawsuit filed by the American Civil Liberties Union on behalf of several inmates. The AMA team found the jail in complete compliance with 18 of 41 criteria for the standards of accreditation, which have been developed over the past three years of the AMA Jail Project. The jail was in partial compliance in 11 areas and did not comply in 12. At the trial, set for September 11, the court will be asked to determine what the jail is constitutionally required to provide for the inmates.



Dx: recurrent
herpes labialis

OTC.
See PDR
for Product
Information.

For samples, write Dept. F at:

CAMPBELL LABORATORIES, INC.
P.O. Box 812, FDR, N.Y., N.Y. 10022

"Herpecin-L" is available at all Medicare and Glaser Drug Stores and other select pharmacies.

An open letter to Physicians

Many physicians are seeking relief from the ever increasing pressures of private practice. If you are a physician, and less than 56 years of age, the United States Air Force Medical Service offers you an alternative and a unique challenge.

The Air Force physician participates in a group practice environment with the entire spectrum of medical specialties available. Air Force hospitals are accredited and are fully equipped. Health care is provided to every patient without regard for his ability to pay.

Benefits provide a secure and satisfying lifestyle, including 30 days of annual paid vacation, professional pay and recreational opportunities.

Consider the Air Force as an alternative to your present practice. Positions are available in primary health care delivery, and a few major medical specialties.

Starting salaries and rank are commensurate with education and experience. Assignment to a specific Air Force Hospital within the United States or overseas may be arranged.

Consider Air Force Medicine. Excellent pay and benefits, professional challenge and educational opportunities make the Air Force Medical Service a viable alternative to private practice.

Contact: Capt. Steven DeWoody
(314) 263-0319

Air Force. A great way of life.

Tenuate® ⓒⅣ
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence*. Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy*: Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children*: Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular*: Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System*: Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal*: Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic*: Urticaria, rash, ecchymosis, erythema. *Endocrine*: impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System*: Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous*: A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid resoiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request from Medical Research Department, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon [Dillon], R.H., and Leyland, H.M. A comprehensive review of diethylpropion hydrochloride. In, Central Mechanisms of Anorectic Drugs, S. Garattini and R. Samanin, Ed., New York, Raven Press, 1978, pp 391-404

Merrell

9 4672 (Y957A)

Overweight may not always be simple... complications can develop.*

Complicated or not...

Tenuate® Dospan® ⒸIV

(diethylpropion hydrochloride NF)

75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

In uncomplicated overweight.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate—it makes sense. And it's responsible medicine.

---

*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

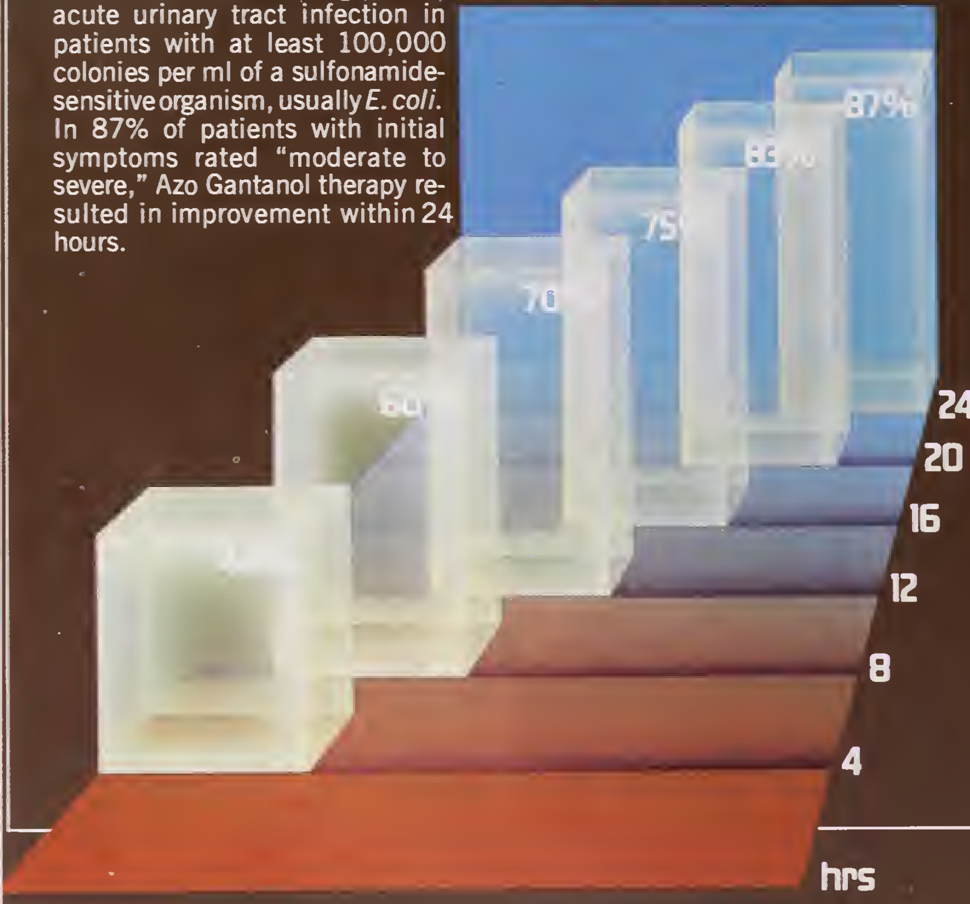
Merrell

For prescribing information see opposite page.

Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for
the pain

for
the pathogens

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110

Before prescribing, please consult complete
uct information, a summary of which follow
Indications: In adults, urinary tract infectio
complicated by pain (primarily pyelonephriti
pyelitis and cystitis) due to susceptible orga
(usually *E. coli, Klebsiella-Aerobacter, Sta*
coccus aureus, Proteus mirabilis, and, less
quently, *Proteus vulgaris*) in the absence of
obstructive uropathy or foreign bodies. **Note:**
fully coordinate *in vitro* sulfonamide sensitiv
tests with bacteriologic and clinical response
aminobenzoic acid to follow-up culture medi
increasing frequency of resistant organisms l
the usefulness of antibacterials including sul
fonamides. Measure sulfonamide blood level
variations may occur; 20 mg/100 ml should
maximum total level.
Contraindications: Children below age 12; su
fonamide hypersensitivity; pregnancy at term
during nursing period; because Azo Gantanol
tains phenazopyridine hydrochloride it is con
dicated in glomerulonephritis, severe hepatit
uremia, and pyelonephritis of pregnancy with
disturbances.
Warnings: Safety during pregnancy not estab
Deaths from hypersensitivity reactions, agran
tosis, aplastic anemia and other blood dyscra
have been reported and early clinical signs (s
throat, fever, pallor, purpura or jaundice) may
dicate serious blood disorders. Frequent CBC
urinalysis with microscopic examination are r
ommended during sulfonamide therapy.
Precautions: Use cautiously in patients with i
paired renal or hepatic function, severe aller
bronchial asthma; in glucose-6-phosphate
dehydrogenase-deficient individuals in whom
dose-related hemolysis may occur. Maintain
adequate fluid intake to prevent crystalluria a
stone formation.
Adverse Reactions: *Blood dyscrasias* (agran-
ulocytosis, aplastic anemia, thrombocytopen
leukopenia, hemolytic anemia, purpura, hyp
thrombinemia and methemoglobinemia); *alle*
reactions (erythema multiforme, skin eruptio
Stevens-Johnson syndrome, epidermal necro
urticaria, serum sickness, pruritus, exfoliati
dermatitis, anaphylactoid reactions, periorbi
edema, conjunctival and scleral injection, ph
sensitization, arthralgia and allergic myocard
G.I. reactions (nausea, emesis, abdominal
hepatitis, diarrhea, anorexia, pancreatitis a
stomatitis); *CNS reactions* (headache, peri
neuritis, mental depression, convulsions, a
hallucinations, tinnitus, vertigo and insomn
miscellaneous reactions (drug fever, chills,
nephrosis with oliguria and anuria, periarter
nodosa and L. E. phenomenon). Due to certa
chemical similarities with some goitrogens, d
uretics (acetazolamide, thiazides) and oral
glycemic agents, sulfonamides have caused
instances of goiter production, diuresis and h
glycemia. Cross-sensitivity with these agents
exist.
Dosage: Azo Gantanol is intended for the acu
painful phase of urinary tract infections. *Usu*
adult dosage: 2 Gm (4 tabs) initially, then 1
(2 tabs) B.I.D. for up to 3 days. If pain pers
causes other than infection should be sough
After relief of pain has been obtained, conti
treatment with Gantanol (sulfamethoxazole)
be considered.
NOTE: Patients should be told that the oran
dye (phenazopyridine HCl) will color the uri
Supplied: Tablets, red, film-coated, each con
ing 0.5 Gm sulfamethoxazole and 100 mg
phenazopyridine HCl—bottles of 100 and 5

ROCHE

Roche Laboratories
Division of Hoffmann-La Roch
Nutley, New Jersey 07110

New Members

Lowry K. Arnold, M.D., 101 Memorial Dr., St. Mary's Hospital, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Arnold is a native of Butler, received his preliminary education at Westminster College and his M.D. degree at the University of Missouri-Columbia in 1975. He specializes in pathology.

Larry D. Blessing, M.D., Highway 136 East, Albany 64402, has become a member of Northwest Missouri Counties Medical Society. Dr. Blessing is a native of Bethany, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1974. He specializes in internal medicine and gastroenterology.

Nanjappa Chandramohan, M.D., 215 Elm, Washington 63090, has become a member of Franklin-Gasconade-Warren Counties Medical Society. Dr. Chandramohan is a native of India, received his preliminary education at Sir Theagaraya College and his M.D. degree at the Madras University in 1966. He specializes in infectious diseases.

John B. Cotter, M.D., 1410 W. 50th, Kansas City 64112, has become a member of Jackson County Medical Society. Dr. Cotter is a native of Zanesville, Ohio, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1972. He pecializes in ophthalmology.

Frank Knight, M.D., University of Missouri Medical Center, Columbia 65212, has become a member of Boone County Medical Society. Dr. Knight is a native of Kansas City, received his preliminary education at the University of Missouri-Columbia and his M.D. degree at the University of Missouri-Columbia in 1971. He pecializes in radiology.

Faquir Muhammud, M.D., 11155 Dunn Rd., uite 213, St. Louis 63136, has become a member f St. Louis Metropolitan Medical Society. Dr. Muhammud is a native of India, received his preminary education at Government College and is M.D. degree at Sind University in 1972. He ecializes in internal medicine.

James W. Owen, M.D., 13190 S. Outer Forty, Chesterfield 62017, has become a member of St. Louis Metropolitan Medical Society. Dr. Owen is a native of Creve Coeur, received his preliminary education at Washington University and his M.D. degree at Washington University in 1946. He specializes in internal medicine.

William A. Robinson, M.D., Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Robinson is a native of St. Louis, received his preliminary education at Tulane University and his M.D. degree at Tulane University in 1975. He specializes in emergency medicine.

Merrill L. Stass-Isern, M.D., Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Stass-Isern is a native of New York, received his preliminary education at Florida Atlantic University and his M.D. degree at the University of Zaragoza in Spain in 1977. He specializes in emergency medicine.

Arturo Antonio Tenorio, M.D., Main and Willow, Stanberry 64489, has become a member of Northwest Missouri Counties Medical Society. Dr. Tenorio is a native of Peru, received his preliminary education at University of San Marcos and his M.D. degree at the University of San Marcos in 1970. He specializes in general and thoracic surgery.

Genoveva Tenorio, M.D., Main and Willow, Stanberry 64489, has become a member of Northwest Missouri Counties Medical Society. Dr. Tenorio is a native of Peru, received her preliminary education at the University of San Marcos and her M.D. degree at the University of San Marcos in 1969. She specializes in pediatrics and family practice.

> In one case out of a hundred, a point is excessively discussed because it is obscure. The ninety-nine remaining times it is obscure because it is excessively discussed.
>
> E. A. Poe
> The Rationale of Verse, 1843

In Memoriam

Marvin L. Napper, M.D., Rt. 1, Box 311, Ash Grove 65604; a graduate of Washington University, 1931; member of Greene County Medical Society; age 74; died June 14, 1979.

Donald H. Finger, M.D., 522 N. New Ballas Rd., St. Louis 63141; a graduate of Washington University, 1950; member of St. Louis Metropolitan Medical Society; age 53; died June 21, 1979.

Walter Roland Langston, M.D., 1453 S. Fairway Terr., Springfield 65804; a graduate of Washington University, 1935; member of Greene County Medical Society; age 68; died June 24, 1979.

W. Wallace Greene, M.D., 2008 W. 68th, Shawnee Mission, Kan. 66208; a graduate of Washington University, 1931; member of Jackson County Medical Society; age 73; died July 8, 1979.

Manuel F. Menendez, M.D., 6424 Southland Ave., St. Louis 63109; a graduate of Havana Medical School, 1956; member of St. Louis Metropolitan Medical Society; age 52; died July 24, 1979.

Louis P. Hetlage, M.D., 21 Burgundy Dr., Lake St. Louis 63367; a graduate of Washington University School of Medicine, 1951; member of St. Charles-Lincoln County Medical Society; age 54; died Aug. 9, 1979.

For MSMA Impaired Physician Program Assistance,

Call 314-636-5744

24-Hour Telephone Answering Service. Calls Are Confidential.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

Since 1899

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Borgmann and Philip E. Moppert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
Suite 202-A, 6600 W. 95th Street, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

INDEX TO ADVERTISERS

They Help Make Missouri Medicine *Possible*

Beltone Electronics Corporation 479
Burroughs Wellcome Co. 467

Campbell Laboratories, Inc. 506

Goetz-Niemer Co. 502

Fred S. James & Co. of Missouri, Inc. 498

Eli Lilly & Company 478

Mead Johnson Pharmaceutical Division . Insert (466-467)
Medical Defense Associates, Ltd. 497
Medical Protective Company ....
Merck Sharp & Dohme 466
Merrell-National Laboratories .... 466, Insert (466-467), Insert (470-471), 471, 472, 506, Insert (506-507)
MOMEDICO 462
Munns Medical Supply 504

Purepac Pharmaceuticals 477

Roche Laboratories ..... 463, Insert (506-507), 511, 512

Smith, Kline & French .... Insert (470-471)

U. S. Air Force 506

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

PPORTUNITIES — E.R. physicians to staff E.R. evenings nd weekends for progressive and modern 50-bed hospital in he center of the Ozarks. City of 6,000; trade area of 20,000 vith expanding population. Lakes, rivers, resorts, golf, etc. d Farnsworth, Administrator, Salem Memorial District ospital, P.O. Box 430, Salem, Mo. 65560. (314) 729-6626.

FULL-TIME EMERGENCY MEDICINE OPPORTUNITY — Jefferson City, Mo. at St. Mary's/Memorial Hospitals. Congenial atmosphere. Work two days per week and earn $44,000+ annually. $5,000,000 malpractice coverage. Send CV to Cecil Oakes, M.D., Emergency Department, 610 West Elm, Jefferson City, Mo. 65101 or call collect (314) 878-2280.

OPPORTUNITIES AVAILABLE — In pleasant rural community 20 miles outside of Columbia with a well-equipped hospital that provides quality patient care. Financial assistance available. For more information, call Lifemark Corporation's Physician Relations Department, (713) 621-8131.

CALL 314-636-5744 — For MSMA Impaired Physician Assistance Program. 24-hour answering Service. Calls are confidential.

EMPLOYMENT OPPORTUNITIES — The Division of Vocational Rehabilitation — Department of Elementary and Secondary Education, is accepting applications for medical consultants to work in the Division central and district offices. Applicants must have a license to practice medicine in the state of Missouri. Consultants may be employed from two hours to 32 hours per week, as needed. Inquiries should be directed to either William H. Keith, Assistant Commissioner for Vocational Rehabilitation, 3523 North Ten Mile Drive, Jefferson City, Missouri 65101 — Telephone (314) 751-3251; or Donald Fishback, Office of Administration, Division of Purchasing, State Capitol Building, Jefferson City, Missouri 65102 — Telephone (314) 751-4204.

FARM FOR SALE — By owner. Ranch in Hickory County, 2,120 acres for investment, development or recreation. Wild life; 1 mile Little Niangua River frontage. Several springs. Modern House. Corral; 1,500 acres pasture; 600 acres timber. Terms can be arranged. Phone (314) 265-7344.

OPPORTUNITIES AVAILABLE — For permanent full-time office practice with no weekend or hospital responsibility. Board Certified general internist or family practitioner desired. Employment terms negotiable. Space, equipment and staff furnished. Contact G. W. Kelley, Administrator, Medical Center of Florissant, 1125 Graham Road, St. Louis, Missouri 63031. (314) 838-5700.

Pre-Medical Students

Current undergraduate pre-medical students may now compete for several hundred Air Force scholarships. These scholarships are to be awarded to students accepted into medical schools as freshmen or at the beginning of their sophomore year. The scholarship provides for tuition, books, lab fees and equipment, plus a $400 monthly allowance. Investigate this financial alternative to the high cost of medical education.

Contact: Capt. Steven DeWoody
(314) 263-0319

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

The special committee named by the MSMA Council to study the problem of refugee physicians coming into the state of Missouri met in Kansas City on Sunday, March 19, 1939. According to *Time* magazine, on Feb. 13, 1939, there has been a lot of loose talk concerning the seriousness of this problem. It reports:

"Contrary to popular opinion, there are not 25,000 emigre physicians in the United States. According to the AMA, there are only about 1,180. These have trickled in over a period of six years. Last week, *Medical Economics* issued a loud blast against 'Refugees Unlimited.' It stated doctors are 'coming in droves' to the U.S.A. Against *Medical Economics* stands the opinion of several hundreds of the most eminent physicians in the United States who say that during the next three years, no more than 2,500 European physicians will come to settle in the United States."

Dr. Logan Clendening, Kansas City, delivered the Beaumont Lecture on the history of medicine at Yale University School of Medicine on April 21. His subject was "Medicine in Paris at the Time of Oliver Wendell Holmes' Visit."

The Atchison County Medical Society met in Tarkio on May 12. The following officers were elected: Dr. Charles H. Flynn, Tarkio, president; Dr. Charles T. Settle, Rockport, vice-president; and Dr. Emmett B. Settle, Rockport, secretary-treasurer.

TWENTY-FIVE YEARS AGO

MSMA Secretary E. Royse Bohrer, M.D., Jefferson City, reports that the official membership in the Association on Jan. 1, 1953 was 3,607 and on Dec. 31, 1953 it was 3,794.

Newly elected officers of the Missouri Heart Association are J. Will Fleming, Jr., M.D., Moberly, president, and F. Stanley Morest, M.D., Kansas City, secretary. Members of the board of directors are Drs. A. Graham, Asher, A. Morris Ginsberg and Don Carlos Peete, all of Kansas City.

W. W. Bauer, M.D., AMA director, was the featured speaker at the Buchanan County Medical Society's 50th Anniversary Dinner early in June. The honored members of the Society are Drs. Floyd Spencer, T. M. Paul, J. M. Bell, W. E. Pentz and H. E. Petersen.

Dr. D. M. Nigro of Kansas City, director of the Knute Rockne Boys Club, received a plaque at the Missouri Military Academy in honor of his work with the youths.

The Vincent Park Williams memorial lecture was delivered in Kansas City by Arnold S. Jackson, M.D.

TEN YEARS AGO

The 1969-1970 officers of the Missouri State Medical Association are Drs. Doyle C. McCraw, Bolivar, president; Joseph L. Fisher, St. Joseph, president-elect; and David N. Kerr, St. Louis, immediate past-president. Vice-presidents are Drs. Charles H. Lewellen, Louisiana; Walter T. Tillman, Springfield; and Dillard M. Eubank, Raytown. Other officers are Drs. Max S. Franklin, St. Louis, treasurer; Paul F. Max, St. Louis, speaker; and E. D. Imes, Maryville, vice-speaker.

A study of 116 reported cases of brucellosis among human beings in Missouri from January, 1958 through December, 1965 shows that the pattern of the disease has changed from a moderately prevalent disease to a relatively rare disease; from a rural to an urban distribution; and from farm families to a disease of veterinarians and meat packers, primarily affecting adult males.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see back cover.

Her next attack of cystitis may require

the Bactrim™ 3-system counterattac

Philadelphia Library
19 South 22nd St.
Philadelphia, PA 19103

ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Entero bacteriaceae* in the bowel without the emergence of res tant organisms. Thus, Bactrim reduces the risk of introi colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal trac

Please see reverse side for summary of product information.

Missouri Medicine

Vol. 76, No. 10 (ISSN 0026-6620) October, 1979

Human Tetanus

Prevention and Treatment

Depressive Illness in Children

Blunt Trauma With Delayed Femoral Artery Occlusion

Editor's Corner 'Aphorisms'

Antibiotic-Associated Pseudomembranous Colitis

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
NOV 1 - 1979

MISSOURI STATE MEDICAL ASSOCIATION

Contents • Page 519

In unity there is strength. That's why there's Momedico.

Nobody knows a doctor's needs better than a doctor. That includes your need for malpractice insurance. But shouldn't you be looking for more than just coverage?

That's why there's Momedico. Formed by Missouri doctors, for the protection of Missouri doctors, Momedico is the only professional liability insurance company backed by the Missouri State Medical Association.

With Momedico, you get the needed coverage at a competitive price. You also get a voice in the company's policies. You become part of a doctor-owned, doctor-directed organization that has one goal: your welfare. There are no earnings to retain for stockholders' benefit, no disappearing acts in the middle of a crisis.

We're doctors working together. More than 80,000 physicians in 19 similar companies in America are protected like this. And it works.

Find out the advantages of having your malpractice insurance with Momedico. Just mail the coupon below and we'll tell you the whole story.

☑ Yes. I would like to know more about professional liability insurance with Momedico.

☐ Have your agent call me. (Best time to call__________)

☐ Send me more information, please

MOMEDICO®

Better Protection. Together.

Sponsored by the Missouri State Medical Association.

NAME

ADDRESS

CITY/RFD

ZIP PHONE #

Mail to: Momedico, 100 North Broadway, St. Louis, MO 63102 or call Collect (314) 241-4774

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage pai Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Associati 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year, Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fult Missouri.

PERFORMANCE. PROVEN EFFECTIVENESS WITHIN A WIDE SAFETY MARGIN.

IUM®
ROCHE
LIBRIUM®
10 ROCHE

While Roche Laboratories already knows more about the performance of Librium than anyone else, we keep on learning every day.

For example, the highly favorable benefits-to-risk ratio of Librium is a well-documented matter of record.

And, of course, the specific calming action of Librium has been demonstrated in millions of patients around the world. In a large number of these patients, Librium was used concomitantly with other primary medications.

Proven performance within a wide safety margin. Basically, that's what Librium is all about.

LIBRIUM® Ⓒ IV

chlordiazepoxide HCl/Roche

THE ANXIETY-SPECIFIC

efore prescribing, please consult complete roduct information, a summary of which fol- ows:

ndications: Relief of anxiety and tension occur- ing alone or accompanying various disease tates. Efficacy beyond four months not estab- shed by systematic clinical studies. Periodic eassessment of therapy recommended.
ontraindications: Patients with known hyper- ensitivity to the drug.
arnings: Warn patients that mental and/or hysical abilities required for tasks such as driv- g or operating machinery may be impaired, as ay be mental alertness in children, and that oncomitant use with alcohol or CNS de- ressants may have an additive effect. Though hysical and psychological dependence have arely been reported on recommended doses, se caution in administering to addiction-prone dividuals or those who might increase dosage; ithdrawal symptoms (including convulsions), llowing discontinuation of the drug and similar those seen with barbiturates, have been re- orted.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.,* excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

ROCHE
Roche Products Inc.
Manati, Puerto Rico 00701

THE ST. LOUIS SURGICAL SOCIETY

presents

THE 1979 FALL PANEL DISCUSSION

"To Peep or Not to Peep"

Guest Moderator

Watts R. Webb, M.D.

Program Participants

Watts R. Webb, M.D.
Professor and Chairman,
Department of Surgery
Tulane University
New Orleans, Louisiana

William D. Owens, M.D.
Associate Professor of
Anesthesiology
Washington University
St. Louis, Missouri

Charles W. Otto, M.D.
Assistant Professor in the
Department of Anesthesia
and the Department of
Internal Medicine
University of Arizona Medical Center
Tucson, Arizona

Tuesday, Nov. 6, 1979
5:30 P.M.

St. Louis Metropolitan Medical Society
Auditorium
3839 Lindell Boulevard
St. Louis, Missouri

Tenuate® ©IV
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states Patients with a history of drug abuse During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly *Drug Dependence* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy*: Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children*: Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary

ADVERSE REACTIONS: *Cardiovascular* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System*: Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal*: Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic*. Urticaria, rash, ecchymosis, erythema, *Endocrine*: Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System*: Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release. One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request from Medical Research Department. MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215 2. Hoekenga, M.T., O'Dillon (Dillon), R.H., and Leyland, H.M. A comprehensive review of diethylpropion hydrochloride. In, Central Mechanisms of Anorectic Drugs, S Garattini and R. Samanin, Ed., New York, Raven Press, 1978, pp. 391-404.

Merrell

9 4672 (Y957A)

Overweight may not always be simple...
complications can develop.*
Complicated or not...

Tenuate® Dospan® ©IV
(diethylpropion hydrochloride NF)
75 mg. controlled-release tablets

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

In uncomplicated overweight.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.[1] And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."[2] Compared with the amphetamines, diethylpropion has minimal potential for abuse.

Tenuate–it makes sense.
And it's responsible medicine.

*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

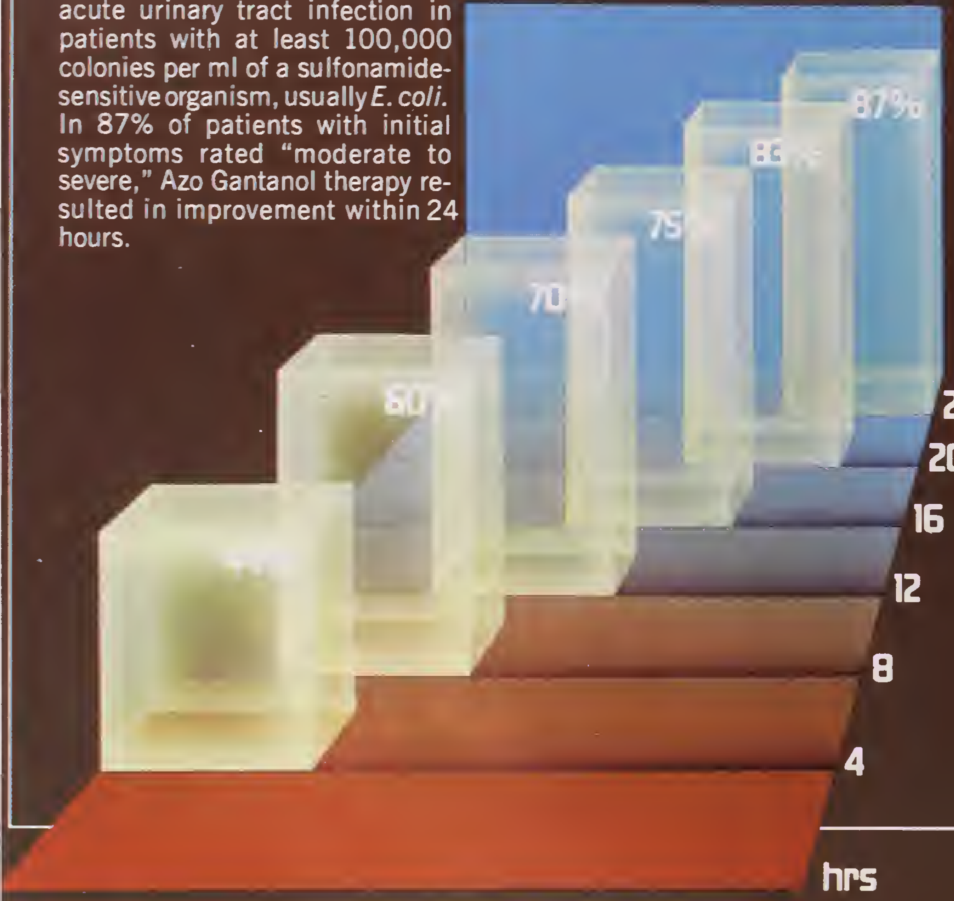
Merrell

For prescribing information see opposite page.

Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli.* In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for the pain **for the pathogens**

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

Before prescribing, please consult complet
uct information, a summary of which follow
Indications: In adults, urinary tract infectio
complicated by pain (primarily pyelonephri
pyelitis and cystitis) due to susceptible org
(usually *E. coli, Klebsiella-Aerobacter, Sta*
coccus aureus, Proteus mirabilis, and, les
quently, *Proteus vulgaris*) in the absence
obstructive uropathy or foreign bodies. **Not**
fully coordinate *in vitro* **sulfonamide sensi**
tests with bacteriologic and clinical respon
aminobenzoic acid to follow-up culture
increasing frequency of resistant organisms
the usefulness of antibacterials including
fonamides. Measure sulfonamide blood le
variations may occur; 20 mg/100 ml shoul
maximum total level.
Contraindications: Children below age 12;
fonamide hypersensitivity; pregnancy at te
during nursing period; because Azo Gantan
tains phenazopyridine hydrochloride it is
dicated in glomerulonephritis, severe hepa
uremia, and pyelonephritis of pregnancy w
disturbances.
Warnings: Safety during pregnancy not est
Deaths from hypersensitivity reactions, ag
tosis, aplastic anemia and other blood dys
have been reported and early clinical signs
throat, fever, pallor, purpura or jaundice)
dicate serious blood disorders. Frequent C
urinalysis with microscopic examination ar
ommended during sulfonamide therapy.
Precautions: Use cautiously in patients wit
paired renal or hepatic function, severe all
bronchial asthma; in glucose-6-phosphate
dehydrogenase-deficient individuals in wh
dose-related hemolysis may occur. Maintai
adequate fluid intake to prevent crystalluri
stone formation.
Adverse Reactions: *Blood dyscrasias* (agran
ulocytosis, aplastic anemia, thrombocytope
leukopenia, hemolytic anemia, purpura, hy
thrombinemia and methemoglobinemia); a
reactions (erythema multiforme, skin erupti
Stevens-Johnson syndrome, epidermal necr
urticaria, serum sickness, pruritus, exfoliat
dermatitis, anaphylactoid reactions, perior
edema, conjunctival and scleral injection,
sensitization, arthralgia and allergic myoca
G.I. reactions (nausea, emesis, abdominal
hepatitis, diarrhea, anorexia, pancreatitis a
stomatitis); *CNS reactions* (headache, peri
neuritis, mental depression, convulsions, a
hallucinations, tinnitus, vertigo and insomn
miscellaneous reactions (drug fever, chills,
nephrosis with oliguria and anuria, periarte
nodosa and L. E. phenomenon). Due to ce
chemical similarities with some goitrogens,
uretics (acetazolamide, thiazides) and oral
glycemic agents, sulfonamides have caused
instances of goiter production, diuresis and
glycemia. Cross-sensitivity with these agent
exist.
Dosage: Azo Gantanol is intended for the ac
painful phase of urinary tract infections. *Us*
adult dosage: 2 Gm (4 tabs) initially, then 1
(2 tabs) B.I.D. for up to 3 days. If pain pers
causes other than infection should be sough
After relief of pain has been obtained, conti
treatment with Gantanol (sulfamethoxazole)
be considered.
NOTE: Patients should be told that the oran
dye (phenazopyridine HCl) will color the uri
Supplied: Tablets, red, film-coated, each co
ing 0.5 Gm sulfamethoxazole and 100 mg
phenazopyridine HCl—bottles of 100 and

ROCHE

Roche Laboratories
Division of Hoffmann-La R
Nutley, New Jersey 07110

MSMA

MISSOURI STATE MEDICAL ASSOCIATION

NEWS ROUND - UP

October, 1979

FDA has toll-free number to report drug and device problems

The Food and Drug Administration now has a toll-free telephone number for health care professionals to report problems they've experienced with drugs, medical devices and *in vitro* diagnostic products. The number is 800-638-6725.

The FDA encourages health professionals to report:
- hazardous or potentially hazardous products
- product mislabeling or improper labeling
- incomplete or confusing instructions
- erroneous information
- designs that encourage human error
- performance failures
- non-sterile products
- packaging errors
- defective components
- quality control problems
- any other situation that could affect the safety and efficacy of a product

These problem reports help FDA determine when a product poses a significant potential hazard to health, sometimes necessitating a recall. The information also is used to detect recurring or widespread problems and to search out deficiencies useful in developing profiles and trends of manufacturer and/or product problems that might suggest needed amendment of performance or good manufacturing standards.

The U.S. Pharmacopeia operates this program under contract with FDA's Bureaus of Drugs and Medical Devices. Callers should be ready to provide: their name, zip code, and phone number; product name, strength, size, etc.; lot number and expiration date, if applicable and available; date purchased and source, if known; manufacturer's name and address; labeler's name and address, if different from the manufacturer's; and the problem noted.

Non-members urged to join organized medicine

The MSMA recently prepared an information packet to send to all physicians in Missouri who are not members of the MSMA, encouraging them to become a part of organized medicine.

The packet contained a letter of invitation to join the MSMA from President Andrew McCanse, M.D., an information sheet, "What's in the MSMA for Me?", a membership application form and a return envelope. Also included was a letter from Hoyt D. Garner, M.D., AMA President, and an explanation sheet, "Where AMA stands on the issues."

These packets were sent in bulk to the local medical societies; the societies then added any material they wished and mailed the packets to all of the physicians they would like to belong to their societies.

The MSMA hopes this project will attract more members and provide new support for the local medical societies, the MSMA and the AMA.

MSMA handles dues billing for 12 component societies

The MSMA is again collecting dues for secretaries of component medical societies who wish this service. To date, 12 societies have agreed to have the MSMA handle their dues billing.

This system has worked well in the past. Through the MSMA computer billing method, a bill is sent to each local society member, the member returns his dues to the MSMA and then the MSMA issues a check monthly for all dues received to the component society secretary.

The advantage of using this method is that it reduces the amount of membership records a component society secretary must keep.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

MSMA publishes 'Your Health' for patients to read

A new health information newsletter is being mailed to MSMA members in October. This publication, *Your Health,* is intended to be placed in physicians' waiting rooms for patients to read.

Your Health contains articles on a variety of topics relating to health and safety. Suggestions of topics for future issues may be sent to MSMA headquarters.

Physicians must comply with Generic Drug Law

Missouri's Generic Drug law has been effect since January 1, 1979, but there are still a number of physicians who are not complying with the law

The law provides physicians with the right to designate the specific drug to be dispensed, so it does not restrict the physician's right to use professional judgment.

However, to comply with the law, all prescription forms must contain the choices, "Dispense as Written" on the right side of the form and "Substitution Permitted" on the left side.

The sample prescription form shown below can be used as a guide.

Physicians and spouses respond to MMPAC mailing

A record high number of 1381 physicians and auxiliary members belong to the Missouri Medical Political Action Committee as of September 28, 1979.

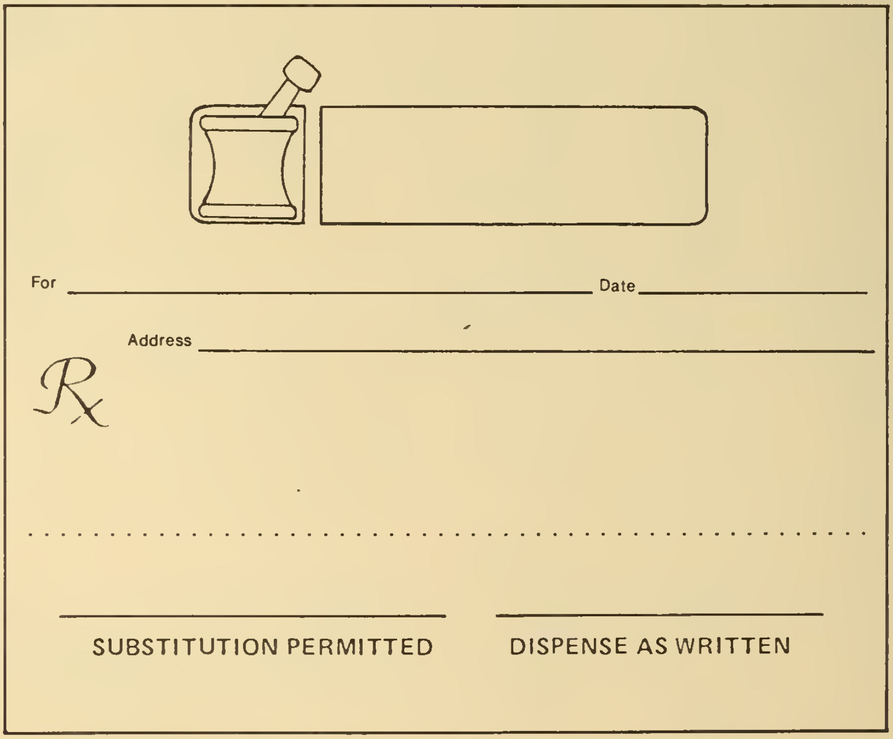
The PAC total includes 1285 regular members, 90 sustaining members and 6 auxiliary members. A number of these have joined in response to a MMPAC solicitation mailed in August.

However, this "record high" number of MMPAC members is still only 20 percent of the more than 5,300 members of the MSMA. Many more MMPAC supporters are needed to insure medical input into political issues affecting medicine.

MMPAC has one goal — to determine which candidates are friends of medicine and to help get them elected. But this takes money — your money!

Please .... if you are not already a member of MMPAC, send in your $100 Sustaining Membership, $40 Family Membership or $25 Family Membership today. Mail it to MMPAC, P.O. Box 1402, Jefferson City, MO 65102.

(Copies of MMPAC and AMPAC reports are filed with the Federal Election Commission and are available for purchase from the Federal Election Commission, Washington, D.C. If your practice is incorporated. MMPAC and AMPAC voluntary political contributions should be written on a PERSONAL CHECK. Contributions are not limited to the suggested amount. Neither the MSMA nor the AMA will favor or disadvantage anyone based upon the amount of or failure to make PAC contributions. Contributions are subject to the limitations of FEC Regulations Sections 110.1, 110.2 and 110.5. Federal regulations require this notice.)



For ______________________ Date __________

Address ______________________

℞

. . . .

SUBSTITUTION PERMITTED ______________ DISPENSE AS WRITTEN ______________

MSMA Interim Session November 10-11, 1979 Columbia

IT'S HIGHLY RECOMMENDED... AND FOR GOOD REASONS

NEOSPORIN® OINTMENT
POLYMYXIN B-BACITRACIN-NEOMYCIN
TOPICAL ANTIBACTERIAL
Gram-negative
Pseudomonas
Hemophilus
Klebsiella
Aerobacter
Escherichia
Proteus
Gram-positive
Corynebacterium
Staphylococcus
Streptococcus
Pneumococcus
Polymyxin B
Neomycin
Bacitracin

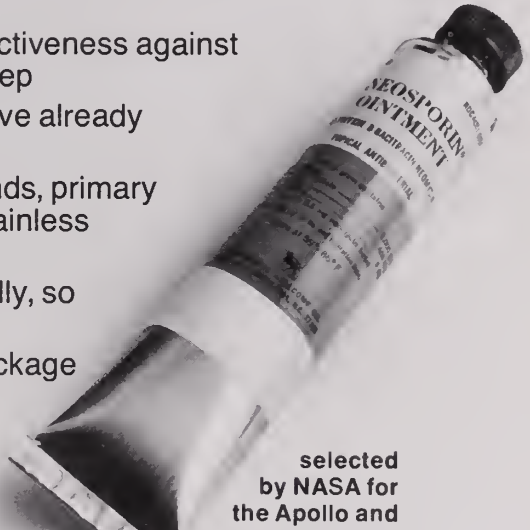
provides broad-spectrum, overlapping antibacterial effectiveness against common susceptible pathogens, including staph and strep

helps prevent topical infections, and treats those that have already started

it's good medicine for abrasions, lacerations, open wounds, primary pyodermas, secondarily infected dermatoses; and it's painless and cosmetically pleasing

contains three antibiotics that are rarely used systemically, so the risk of sensitization is minimal

you can recommend it in any of the three convenient package sizes: 1 oz tube, ½ oz tube, or the versatile, single-use foil packet


NEOSPORIN® OINTMENT
TOPICAL ANTIBACTERIAL

selected by NASA for the Apollo and Skylab missions

EOSPORIN® Ointment

lymyxin B-bacitracin-neomycin)

gram contains: Aerosporin® (Polymyxin B Sulfate) units, bacitracin zinc 400 units, neomycin sulfate (equivalent to 3.5 mg neomycin base); special white latum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz ox.) foil packets.

NING: Because of the potential hazard of nephro- ty and ototoxicity due to neomycin, care should be ised when using this product in treating extensive , trophic ulceration and other extensive conditions absorption of neomycin is possible. In burns where than 20 percent of the body surface is affected, ially if the patient has impaired renal function or is ing other aminoglycoside antibiotics concurrently, ore than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Rae W. Froelich, M.D., Lebanon
George Bohigian, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
  Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
  Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
  Richard H. Fallon, M.D., St. Louis
  James M. Stokes, M.D., St. Louis
  J. Otto Lottes, M.D., St. Louis
  Theodore L. Paletta, M.D., St. Louis
  Frederick D. Peterson, M.D., St. Louis
  Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
  Vice-Councilor, Paul H. Rother, M.D., St. Charles
5th District, H. Peter Ekern, M.D., Mexico
  Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
  Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
  Donald McIntosh, M.D., Kansas City
  Ronald A. Youmans, M.D., Kansas City
  Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
  Marvin A. Singleton, M.D., Joplin
  Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
  Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
  Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, Wilfred E. Wooldridge, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

Contents for October, 1979

Scientific Articles

Human Tetanus — Prevention and Treatment, *Case Report;* Joe Gertzen, M.D., Robert M. Huster, M.D. and Bruce H. Hamory, M.D. 525

Depressive Illness in Children; Syed Arshad Husain, M.D. 527

Blunt Trauma With Delayed Femoral Artery Occlusion, *Case Report;* Jean René Dupont, M.D. 531

ntibiotic-Associated Pseudomembranous Colitis; Michael D. Jensen, M.D. and C. Kenneth McAllister, M.D. 534

ews and Features

SMA News Round-Up . . . . . Insert (516-517)

hoto-Comment by James W. Clawson, M.D. 520

ditor's Corner 521

n Brief 523

resident's Message 539

SMA Auxiliary 540

SMA Members Receive PRA Award . . . 541

etters to the Editor 545

ontinuing Education Coming Events . . . 546

ews From the Medical Schools 550

n Memoriam 552

ew Members 559

ndex to Advertisers 565

issouri Medicine in Review 566

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D., Columbia
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
F. Thomas Ott, M.D., St. Louis
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiation Therapy
MacDonald B. Logie, M.D., St. Louis
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Photo-Comment by James W. Clawson, M.D., Springfield

See 'Aphorisms,' opposite page.

Editor's Corner

APHORISMS

The reason why 90% of medical partnerships split is the same reason why 90% of wars are fought. The reason is economic. First is the older man who exploits the younger man. Second is the younger man who expects to be jet-propelled into the ranks of the wealthy without ever having had his economic feet wet.

* * *

Considering that patients must pay to see a doctor for treatment of an illness they don't want, I have never failed to be amazed at their tolerance and general good humor.

* * *

The pace at which medical science progresses confounds the bureaucratic numbskulls who are camp-followers. As rapidly as they cause trouble by regulating one clinical breakthrough, a new one occurs. This makes them work which, in turn, makes them miserable.

Hell will undoubtedly be filled with such officious supernumeraries, book-in-hand.

* * *

It is very surprising to me that many physicians continue to think we *might* have socialized medicine. The battle is over. We lost. And we didn't make a very smart fight of it. What really killed us was that we were suckered by the philosophy of "Make it while you can." Then the doors to Fort Knox were left open.

* * *

The appreciation of culture in our society shows itself to be much greater in physicians than in any other group.

Without the medical profession to prop them up, unnumbered symphonies would fold, theater groups could not function, churches would be in dire straits and United Ways in trouble.

And it is no simple matter of income. I know of no lawyers or automobile dealers on welfare, but check the levels of their generosity.

* * *

I am sure I must once have had a patient who said to me, "I'm sorry. I just flat forgot my last appointment."

But that would have been a long time back, and maybe 10,000 missed appointments ago.

* * *

The past century has been a glorious one, but an era is coming to an end. It is becoming increasingly clear that Americans will no longer be able to live on one level with the rest of the world on another.

We had three things going for us; resources we assumed to be inexhaustible, the desire to work and technical know-how greater than anyone else's. The first we have about used up, the second somehow disappeared and the third we gave away.

* * *

Remember! Lightweights sometimes get to be heavyweights.

Wilfred E. Wooldridge

Wilfred E. Wooldridge, M.D.

YOU'LL GET PROMPT
PROFESSIONAL RESULTS
WHEN YOU REFER A
HEARING-IMPAIRED
PATIENT TO A

Beltone®
Hearing Aid Specialist

IN MISSOURI
YOUR INDEPENDENT AUTHORIZED DEALERS ARE:

Lowell G. Bennett
Beltone Hearing Aid Service
318 W. Walnut Street
Springfield, Missouri 65806
(417) 866-0551

Len Gidley
Beltone Kansas City Hearing Aid Service
1001A Grand Avenue
Kansas City, Missouri 64106
(816) 471-1943 (816) 471-4105

Beltone Hearing Aid Service
222 Kirkpatrick Building
St. Joseph, Missouri 64501
(816) 279-6501

Don Hicks
Beltone Hearing Aid Service
North Park Mall
101 Range Line Room 248
Joplin, Missouri 64801
(417) 624-0931

Dean Jones
Beltone Hearing Aid Service
P.O. Box 682 400 E. High
Jefferson City, Missouri 65101
(314) 635-3557

Beltone Hearing Aid Service
21 North 10th
Columbia, Missouri 65201
(314) 443-3401

Beltone Hearing Aid Service
204 S. Jefferson
Mexico, Missouri 65265
(314) 581-1948

Beltone Hearing Aid Service
815 Pine
Rolla, Missouri 65401
(314) 364-2281

Beltone Hearing Aid Service
120 North Clark
Moberly, Missouri 65270
(314) 263-7343

John V. Rawlings
Beltone Hearing Aid Center
1901 Broadway
Cape Girardeau, Missouri 63701
(314) 334-4200

K & H Medical Supply Co.
Beltone Hearing Aid Center
419 Oak Street
Poplar Bluff, Missouri 63901
(314) 686-2242

Gregory L. Sommer
Beltone Hearing Aid Service
914 Olive Street
St. Louis, Missouri 63101
(314) 621-3100

Beltone Hearing Aid Servi
5208 Hampton Avenue
St. Louis, Missouri 63109
(314) 481-3700

Beltone Hearing Aid Servi
111 Church Street
Ferguson, Missouri 63135
(314) 522-6323

Harry B. Young
Beltone Hearing Aid Servi
State Fair Shopping Cent
P.O. Box 1207
Sedalia, Missouri 65301
(816) 826-1631

Beltone Hearing Aid Servi
501 High Street
Boonville, Missouri 65233
(816) 882-6062

Beltone Hearing Aid Servi
101 E. Main
Richmond, Missouri 6408
(816) 776-2600

Beltone Hearing Aid Servi
320 Spring
Sweet Springs, Missouri 651
(816) 335-6727

Beltone WORLD LEADER IN HEARING AIDS AND HEARING TEST INSTRUMENTS
ELECTRONICS CORPORATION
4201 West Victoria Street · Chicago, Illinois 60646
An American Company

in Brief

A summary of AMA, medical & health news

American Medical Association/535 North Dearborn Street/Chicago, Illinois 60610/Phone (312) 527-1500/TWX 910-221-0300

AT ITS ANNUAL MEETING in July, the AMA House of Delegates backed the Council on Medical Education and Board of Trustees and withdrew from the Liaison Committee on Continuing Medical Education. The AMA will immediately resume its role as a primary accreditor of CME-sponsoring organizations through the establishment of a committee of the council. Continuing medical education accreditation was conducted by the AMA for more than a decade before LCCME took over in 1977. The AMA has provided staff for the LCCME and, through 1978, all the costs of accreditation. The House action recognizes state medical associations as the accrediting bodies for institutions and organizations providing local and intrastate CME programs.

THE RESPONSE TO an AMA questionnaire indicates that medical societies are active in cost containment programs. Of the state, metropolitan county and national specialty societies responding, 66% are active in the Voluntary Effort and 56% have organized a physician committee on cost containment. Sixty-three percent of the state societies responding have adopted resolutions or policy statements supporting the 1978 call by Tom E. Nesbitt, M.D., then AMA president, for voluntary restraint of fee increases. Ninety percent of state societies returning the questionnaire said they believe their membership is aware of the AMA's interest in voluntarily managing the cost problem, and 46% said they have recently sponsored meetings on cost containment.

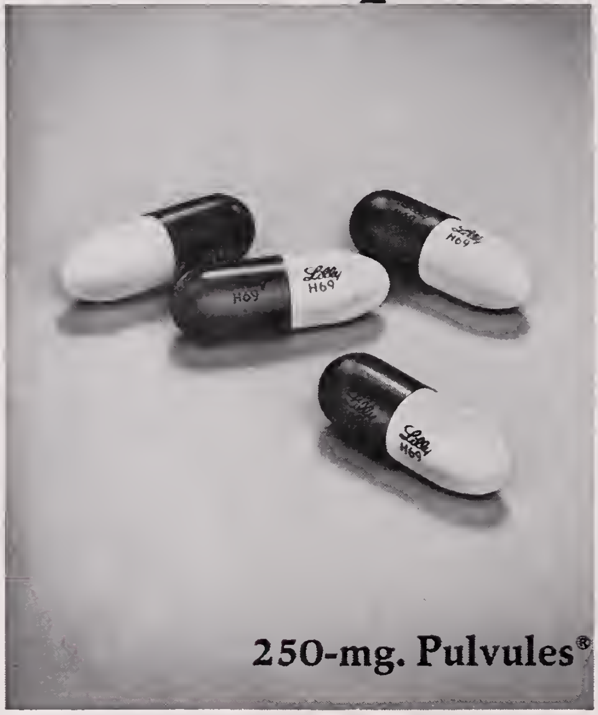
A BILL THAT WOULD PROHIBIT use of federal funds for lobbying state and local legislatures was supported by the AMA in a letter to the Senate Subcommittee on Federal Spending Practices and Open Government. The AMA urged the subcommittee to work for passage of the bill S 691) in the Committee on Governmental Affairs and on the Senate floor. The bill would, "at the very least, remind the heads of our federal agencies that the American people expect their tax dollars to be spent on substantive programs, not on agency image building and massive lobbying efforts," the Association said. "It could also prevent the recurrence of the too familiar scenario wherein a concerted federal lobby effort overwhelms state and local leaders' efforts to be effective in their own governance."

STRATEGIC MANAGEMENT of the medical society in the 1980s is the theme for the October 14-17 executive program to be held at Northwestern University in Evanston, Ill. The program, sponsored by the AMA and the American Association of Medical Society Executives, in cooperation with Northwestern's Graduate School of Management, is designed for senior and experienced medical executives. Registration and program information will be mailed to AAMSE members later this month. For further information contact AAMSE, AMA Headquarters.

DELEGATES OF THE American Osteopathic Assn. voted to allow their members to join the AMA and specialty societies outside the osteopathic profession. AOA President Dale Dodson, D.O., said the abrupt policy shift was the result of growing confidence. "We know that the pluralism between osteopathic and allopathic medicine is going to be maintained," he said. "We have outgrown our paranoia about being swallowed up by the AMA."

"PSROs SHOULD RECEIVE adequate funding to carry out their mission — insuring the medical necessity, quality and appropriateness of health care services rendered to federal program beneficiaries," the AMA said in a letter to the House Ways and Means Subcommittee on Oversight and Investigations. The AMA said the program has been "consistently underfunded" and "this underfunding, exemplified by current funding limitations set for hospital inpatient review by Congress for fiscal year 1979, will likely further diminish the effectiveness of the review system as well as raise substantive questions concerning government's commitment to the peer review program established by the PSRO law."

easy to take



250-mg. Pulvules®

Oral Suspension

250 mg./5 ml.
100 and 200-ml.
sizes

125 mg./5 ml.
60, 100, and
200-ml. sizes

Pediatric Drops

100 mg./ml.
10-ml. size

Keflex®

cephalexin

Lilly

500738

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Volume 76, Number 10 — October, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1979 BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

JO GERTZEN, M.D., ROBERT M. HUSTER, M.D.
and BRUCE H. HAMORY, M.D., *Columbia*

Human Tetanus — Prevention and Treatment

Case Report

ETANUS CAUSES DEATHS AND ILLNESS in the nited States every year despite the ready vailability of a safe and effective vaccine which an entirely prevent the disease. In 1977, Misouri ranked fourth in the U. S. in the number of ases of tetanus reported.[1] It trailed only Texas, lorida and California. Between 1965 and 1974, n average of 175 cases were seen in the U. S. ach year and Missouri ranked eighth among the tates (with six to seven cases annually) in the umber reported.[2, 3] The majority of cases of etanus and most of the deaths occurred in perons over the age of 55.

We have recently seen a case of moderately evere tetanus which is described here to illusrate the necessity for immediate and aggressive reatment once the diagnosis is considered. Most nportantly, this case also emphasizes the connuing need for preventive immunization against etanus in all age groups.

ASE REPORT

A 70-year-old woman punctured her left external ear n Aug. 4, 1978 as she passed under an overhanging ranch while mowing grass. She applied alcohol and oted no signs of infection. The wound was forgotten. our days later, she saw her physician because of ersistent spasm at the left corner of her mouth. She as given 250 units of human tetanus immune globulin tramuscularly and received 500 mg of ampicillin ally every six hours. Although briefly improved, she gain developed facial spasm six days after the injury. On the eighth day, she was hospitalized because of trismus and a temperature of 39 C, and was treated with ampicillin intravenously. By August 19, she was having generalized severe muscle contractions with associated dysphagia and dyspnea. She was transferred to the University of Missouri Medical Center (UMMC). She had never been immunized with tetanus toxoid although in July, 1977, she had been given 250 units of human tetanus immune globulin for a minor injury.

On arrival at UMMC, the patient was alert but had great difficulty speaking due to neck rigidity, dyspnea and generalized spasms which occurred with stimulation. She was admitted to the medical intensive care unit where she was sedated, intubated and supported on a volume respirator. A small bluish puncture wound without exudate or erythema was present on the left

Missouri ranks fourth among the states in the number of cases of tetanus in humans reported annually. The authors report a representative case of tetanus as a focus for the discussion of management which centers around prevention by adequate immunization and immediate aggressive care of the wound. Careful attention to respiratory support and removal of the infected focus are essential once clinical symptoms appear.

The authors are from the Division of Infectious Diseases, Department of Medicine, University of Missouri Medical Center.

ear. Trismus and spasm of the sternocleidomastoid muscles was more severe on the left than the right, the neck was rigid and opisthotonus was present. Results of the neurological examination were normal except for generalized hyperreflexia and the trismus noted above. Results of the remainder of the physical examination and vital signs were unremarkable. Her hemoglobulin level was 17 gm/100 ml and white blood cell count was 12,000/mm^3 with 88% neutrophils, 7% lymphocytes, 4% mononuclears and adequate platelets. Results of her electrocardiogram, chest X-ray and other laboratory studies were normal.

As soon as her airway and respiratory status were secured, she was treated with 3,000 units of human tetanus immune globulin and 0.5 cc tetanus toxoid intramuscularly and 10,000,000 units of aqueous penicillin intravenously per day. The wound on the left ear was immediately debrided and a 1 cm piece of wood was excised. This focus of infection was cultured aerobically and anaerobically but grew only *Enterobacter agglomerans*. On the ninth hospital day, intravenous hyperalimentation was begun and a tracheotomy was performed. She was paralyzed with pancuronium bromide to prevent spasms and given diazepam for sedation. One episode of pneumonia, a urinary tract infection, a brief period of multifocal atrial tachycardia, several episodes of hypotension and oliguria subsequently developed.

By the 32nd day after the injury, pancuronium was stopped and there was no more evidence of tetanus. The patient had survived tetanospasmin intoxication severe enough to require more than three weeks' paralysis. Her convalescence was complicated further by a right occipital lobe infarct which we felt was not directly related to tetanus. She improved slowly and was discharged from the hospital as well 75 days after the original injury. She was given two doses of tetanus toxoid during her hospitalization and is to receive the third dose necessary to complete the primary series in six months to one year.

Discussion

The unfortunate woman's near-fatal illness illustrates the need for a continued emphasis on tetanus immunization and particularly for those over 50 years of age, the age group of greatest incidence. Other groups at risk include the newborn and the drug addict population.

Immunization utilizing adsorbed tetanus toxoid is remarkably effective in preventing tetanus. During World War II, only four cases of tetanus occurred in those who were completely immunized among 2,785,819 adults hospitalized for wounds.[4] Berger[5] has estimated the annual risk of tetanus as 1/300,000 if unimmunized and at 1/300,000,000 if adequately immunized. In those very rare cases in which tetanus does occur despite adequate serum levels of antitoxin (0.01 antitoxin units/ml), the disease manifestations are less severe.[5] Thus adequate immunizations, a defined by a three-dose primary immunizatio series plus a booster every ten years, will protec patients against tetanus even with "tetanus prone" injuries (compound fractures, gunsho wound, wounds contaminated with foreig bodies, deep puncture wounds or wounds con taminated with soil).

In those instances in which an unimmunize individual, such as our patient, receives "tetanus-prone" injury, the appropriate treat ment is (1) aggressive surgical debridement of the puncture wound to remove retained foreign bodies; (2) administration of human tetanus im mune globulin (Hypertet®) in a dose of 250 units and (3) initiation of the primary immunization series with 0.5 cc of absorbed toxoid. Since tetanus organisms require devitalized areas in order to propagate, antibiotic penetration into tissues may be poor. Furthermore, a retained foreign body, such as the small piece of wood in this case, provides a protected site for the or ganisms to multiply and elaborate their toxin. The importance of adequate debridement and institu tion of active immunization with absorbed tetanus toxoid cannot be overemphasized.

Passive immunoprophylaxis is of benefit for only a short time. Following the onset of clinical symptoms of trismus in the present case, the patient's symptoms were slightly improved by 250 u of Hypertet® for only two days before clinical deterioration occurred. Passive immunoprophylaxis is of benefit only to provide circulating antibody while the patient's immune mechanism is generating its own antibody to the toxin. Once clinical tetanus has developed, the recommended dosage of immunoglobulin is much higher than the prophylactic dose. The disease itself does not provide immunity to another attack since the amount of tetanus toxin necessary to produce the clinical symptoms is too low to evoke an antibody response.

Once clinical tetanus occurs, immediate hospitalization and expectant management of complications is important. The severity of clinical illness has been correlated with the incubation period. Patients with an incubation period of less than ten days have a 61.1% case-fatality rate as opposed to a 36.5% case-fatality rate for ten-plus days ($p < 0.01$).[6] Immediate therapy, once tetanus is diagnosed, centers on maintenance of adequate respiration and removal of the infected focus by surgical debridement, penicillin therapy

(Continued on page 530)

SYED ARSHAD HUSAIN, M.D., *Columbia*

Depressive Illness in Children

Depression in children has been increasingly recognized in the last 20 years and is present more than was generally recognized. The author reviews the literature and offers data from a study of depressed children referred to the Department of Psychiatry, University of Missouri School of Medicine.

Dr. Husain is Associate Professor of Psychiatry (Child Psychiatry), Department of Psychiatry, Section of Child Psychiatry at the School of Medicine.

THE ENTITY OF DEPRESSIVE ILLNESS in children was generally disputed until recently when child psychiatrists began to recognize it in clinical practice. It is now agreed that mood disorders do occur in children perhaps more often than is generally realized.

This paper presents a brief review of the literature on depression in children and offers data from a study of depressed children referred to the Department of Psychiatry, University of Missouri-Columbia School of Medicine.

REVIEW OF LITERATURE

Depression in children was recognized by pediatricians as early as the 17th century. Cases of melancholia and suicide among children were being reported in the middle of the 19th century. More recently, "Anaclitic Depression" in infants was described by Spitz.[1] According to his study, 15% of infants under one year of age who are separated from their mothers and placed in orphanages presented a picture characterized by apathy and listlessness. These infants lay and stared into space. They moved little, lost weight, ate poorly and became more susceptible to intercurrent infection. The mortality rate in these infants was high. No physical abnormalities were found.

It has only been in the last two decades that clinical reports of depression in children have been published more frequently and the condition has been increasingly recognized.

Confusion regarding the presence of depression in children stems from the observation that the classic depressive symptoms one encounters in the adult population are seldom present. Rather, the manifestation of depression is mainly behavioral in nature.

It is also observed that these manifestations of depression seem to vary according to the age of the child. According to Toolan,[2] depression in infants appears mainly as eating and sleeping disorders. Colic, crying and head banging are very common. He also found that mothers of these infants were frequently depressed and anxious. Older children show withdrawal, apathy and regression. Toolan calls these manifestations "depressive feelings." As the child grows older, behavior problems such as temper tantrums, disobedience, truancy, running away from home, accident proneness and self destructiveness begin to displace depressive feelings. Toolan calls these behaviors "depressive equivalents." Thus, Toolan concluded that overt manifestation of depression in children is rare. Younger children manifest depression by "depressive feelings" while adolescents manifest it by "depressive equivalents."

Cytryn[3] *et al* observed that depression in children presents itself in three different ways. Young children may express depression through fantasy material (dreams and spontaneous play) or demonstrate it through the responses to thematic apperception test or other projective tests. Older children who have acquired language skills utilize verbal expression to express depression through statements reflecting hopelessness, helplessness, guilt, feeling of unattractiveness, worthlessness, being unloved, suicidal preoccupation and other reasons.

The third mode of expression of sadness is through behavior and mood. The child may show psychomotor retardation, have crying spells and develop loss of appetite. He may have insomnia or manifest signs of masked depression through aggressivity, hyperactivity and other behavior disorders. Cytryn *et al* propose that maturation of

TABLE 1
AGE DISTRIBUTION OF CHILDREN

18-14 yrs	24 (43.6%)
13-10 yrs	16 (29.1%)
10-7 yrs	15 (27.3%)

the defense mechanism from primitive (fantasy) in infancy to more mature defenses in late adolescence influences the changing picture of depression in childhood.

Anthony[4] attributed the difference in manifestation of depression between adult and child to "inability of the child to verbalize his affective state, the incomplete development of superego and the absence of consistent self representation."

ETIOLOGIC CONSIDERATIONS

Psychopathology is more frequently encountered in the families of depressed children. Frommer[5] found an increased incidence of depression among the parents of these children, thus pointing to a possible polygenetic influence.

Early and frequent separation experiences are also seen in the depressed patient. Rutter[6] found that separation experiences in childhood are followed by a higher incidence of depressive illness in adults. Caplan *et al*[7] found that depressed children give a history of parental loss twice as often as the control group. They also noted that loss of parents due to divorce resulting from marital discord was more disruptive and caused depression more often than the loss by death. However, early bereavement has been reported as being frequently associated with suicidal behavior in later life. Sandler and Joffel[8] concluded from their study of 100 depressed children that loss was an important etiological factor.

Factors which interfere with the development of an adequate self-esteem may also contribute to depression. Constant rejection and depreciation of a child by his parent, either expressed directly or in a more subtle manner, are found to predispose depression. McKnew *et al*[9] found that sudden withdrawal of a crucial positive emotional relationship by a central figure in the life of a child while maintaining a physically intimate presence may precipitate depression. Such withdrawal of interest on the part of a parent from a child may occur as a result of illness, personal tragedy or birth of a new baby or other reasons.

STUDY SELECTION

We have examined those children 18 or under who were referred to the University of Missour Medical Center for various psychiatric problems and who were diagnosed as suffering from depression. Included were only those cases which fulfilled the criteria set by Weinberg[10] for depressive illness in children. These cases were further studied for the presenting symptoms and family pathology.

TABLE 2
SEVERITY OF SYMPTOMS

Symptom Complex	*Percentage of Severity*
I. Dysphoric mood	24.3
II. Diminished socialization	24.0
III. Aggressive behavior	20.7
IV. Change in attitude towards school	19.0
V. Change in school performance	18.8
VI. Self depreciatory ideation	17.5
VII. Sleep disturbance	7.6
VIII. Unusual change in appetite	5.5
IX. Somatic complaint	4.8
X. Loss of unusual energy	4.5

PATIENTS

There were 55 children who met Weinberg's criteria for depression. Twenty-eight of these children were boys and 27 were girls. The mean age of the child was 12.7 years with the oldest being 18 years and the youngest 7 years (Table 1).

PRESENTING SYMPTOMS

The most severe symptom complex was dysphoric mood (24.3%) followed by diminished socialization (24.0%) and aggressive behavior (20.7%) (Table 2). The most frequent individual symptom was reflected by statements of sadness, loneliness, unhappiness, helplessness or pessimism. These symptoms were reported by 90.9% of the patients; 76% of patients reported feelings of worthlessness (Table 3). Diminished group participation and social withdrawal were present in 63% of patients. Thirty percent of the patients expressed death wishes and suicidal thought and another 30% made a suicidal attempt. It is interesting to note that symptoms such as sleep disturbance, loss of appetite and loss of energy, which are considered to be some of the classical manifestations of depression in adults, were not commonly present in children.

FAMILY PATHOLOGY (TABLE 4)

I. *Psychiatric Illness*

Presence of psychiatric illness in parents was

TABLE 3
MOST FREQUENT SYMPTOMS OF DEPRESSION IN CHILDREN

Symptoms	No of Patients
1. Statement of appearance of sadness, loneliness, unhappiness and hopelessness and/or pessimism	50 (90.9%)
2. Feeling of worthlessness	42 (76.4%)
3. Decreased group participation	35 (63.6%)
4. Socially withdrawing	35 (63.6%)
5. Difficult to get along	34 (61.8%)
6. Beliefs of persecution	33 (60%)
7. Quarrelsome	32 (58.2%)
8. Loss of usual work effort in school subjects	31 (56.4%)
9. Mood swings, moodiness	31 (56.4%)
10. Irritable, easily annoyed	31 (56.4%)
11. Excessive fighting and sudden behavior	31 (56.4%)
12. Less friendly, less outgoing	30 (54.5%)
13. Frequent complaints from teachers, re daydreaming, poor concentration, others	29 (52.7%)
14. Belligerent, hostile, agitated	29 (52.7%)
15. Does not enjoy school activities	28 (50.1%)
16. Disrespectful of authority	25 (45.4%)
17. Negative, difficult to please	25 (45.4%)
18. Loss of usual social interests	21 (38.2%)
19. Desire to run away or leave home	20 (36.4%)
20. Hypersensitive, cries easily	19 (34.5%)
21. Refusal to attend school	17 (30.9%)
22. Death wishes	17 (30.9%)
23. Suicidal thoughts	17 (30.9%)
24. Suicidal attempts	13 (23.6%)
25. Promiscuity (in girls)	11 (20%)
26. Restless sleep and insomnia	10 (18.2%)
27. Somatic complaints, e.g., headache, abdominal pain	10 (18.2%)
28. Loss of energy	9 (16.6%)
29. Loss of appetite	6 (11.0%)
30. Loss of weight	6 (11.0%)

the most common finding in the family history of depressed children. At least one parent of 32 (59.2%) children was treated for some psychiatric problem. A further scrutiny for the nature of psychiatric illness revealed the following (Table 5):

1. Depression

Depression was found to be the most common psychiatric illness in parents. This condition severe enough to have required hospitalization, was present in 13 (23.7%) parents (six fathers and seven mothers).

TABLE 4
PSYCHOPATHOLOGY IN PARENTS OF DEPRESSED CHILDREN

Psychiatric illness	32 (59.2%)
Divorce	26 (47.3%)
Child abuse	16 (29.0%)
Death of parent	10 (18.2%)
Suicide	3 (5.5%)

2. Alcoholism

Nine (16.4%) fathers were found to be suffering from alcoholism. No mothers were found to have this condition.

3. Anxiety Neurosis

Anxiety neurosis was particularly common in mothers (12.8%) while only two fathers (3.6%) were so diagnosed. Only one father was diagnosed to be suffering from dyscontrol behavior with episodes of violent and aggressive behavior.

II. *Divorce*

A large number of children came from broken homes. Parents of 47.3% of the subjects were divorced following prolonged marital discord.

III. *Child Abuse*

Twenty-nine percent of the children were repeatedly battered by one parent. Three girls were sexually molested by their fathers.

IV. *Bereavement*

Ten (19.2%) children experienced early bereavement as one parent in each case died when the child was under 10 years of age.

V. *Suicide*

Three parents (5.5%) committed suicide prior to the onset of the child's illness.

DISCUSSION

Depressive illness is more commonly present in children than was generally acknowledged. Recognition of depression in children is equally relevant to all physicians who are involved in providing care to children. Since most children manifest depression in behavioral form (difficulty in school, quarrelsomeness, withdrawal) it is easy

TABLE 5
MOST FREQUENT PSYCHIATRIC ILLNESSES IN PARENTS OF DEPRESSED CHILDREN

	Depression	Alcoholism	Anxiety Neurosis	Others	Total
Fathers	6 (11%)	9 (16.4%)	2 (3.6%)	1 (1.8%)	18 (33.8%)
Mothers	7 (12.7%)	0 (0%)	7 (12.8%)	0 (%)	14 (25.4%)
Total	13 (23.7%)	9 (16.4%)	9 (16.4%)	1 (1.8%)	32 (59.2%)

to miss this illness and attribute the disruptive behavior of the child to defiance, stubbornness and laziness. Commonly, pediatricians and family physicians encounter children who develop somatic symptoms without the presence of a demonstrable organic cause. Such patients deserve attention as possible depressives. In these cases, such patients may also have a parental history of significant psychopathology. Our study, and others, have consistently found that parents of these children were also usually depressed or had other psychiatric problems. A history of rejecting and demeaning attitude of the parents toward the child, or of abuse, may alert the physician to this possibility.

On a primary prevention level, the knowledge that early bereavement, divorce and frequent separation may cause depression in children, has important implications. Early psychiatric intervention in children facing such crisis may prevent a subsequent affliction with depression. As Pearce[11] pointed out, a depressive disorder may result in the development of unhealthy behavioral patterns.

References

1. Spitz, R. A.: Anaclitic Depression. Psychoanal. Study Child. 2:313-342 1946
2. Toolan, J. M.: Depression in Children and Adolescents. Amer. J. Orthopsychiatry 32:404-415, 1962.
3. Cytryn L. and McKnew, Jr. D. H.: Factors Influencing the Changin Clinical Expression of Depressive Process in Children. Am. J. Psychiatr 134:8, 1974.
4. Anthony J. and Scott, P.: Manic Depressive Psychosis in Childhood. J Child Psychol. Psychiat. 1:53-72, 1960.
5. Frommer, E.: Depressive Illness in Childhood. Brit. J. Psychiat. 2:117-136, 1968.
6. Rutter, M., Graham, P., Chadwick, O. and Yule, W.: Adolescent Turmoil Fact or Fiction? J. Child Psychol. Psychiat. 17:35-56, 1976.
7. Caplan, G. C. and Douglas, V. I.: Incidence of Parental Loss in Childre With Depressive Mood. J. Child Psychol. Psychiat. 10:225-235, 1969.
8. Sandler, J. and Joffe, W. J.: Notes on Childhood Depression. Int. J Psychoanal. 46:88-96, 1965.
9. McKnew, D. H., Jr. and Cytryn, L.: Historical Background in Childre With Affective Disorder. Am. J. Psychiat. 130:11, 1973.
10. Weinberg, W. A., Rutman, J., Sullivan, L., Penick, F. and Dietz S. G.: Depression in Children Referred to an Educational Diagnostic Center J. Pediatrics 83:1065-1072, 1973.
11. Pearce, J.: Depressive Disorder in Childhood. J. Child Psychol. Psychiat. 18:79-82, 1977.

Reprints: Syed Arshad Husain, M.D.
Dept. of Psychiatry
Section of Child Psychiatry
University of Missouri
N119 Medical Center
Columbia, MO 65212

Human Tetanus

(Continued from page 526)

and hyperimmune serum to bind circulating toxin. Complications of tetanus include respiratory arrest resulting from prolonged tetanic contractions, fractures of long bones and vertebra from intense tetanic spasms, arrhythmias and those complications associated with prolonged artificial respiration; pulmonary emboli, nutritional insufficiency and pulmonary infection.

If endotracheal intubation or tracheostomy and artificial ventilation are necessary, most authors have found it necessary to paralyze the patient as was done in this case. Careful titration of the agent used against the patient's response to the drug must be done. Adequate nutrition must be assured by enteral or parenteral alimentation, and careful observation for signs of superinfection are of particular importance. The program of artificial ventilation must be continued until the effect of tetanus toxin bound to the nerve end plates has been eliminated. This period of time is variable, but generally requires a minimum of ten days. The overall mortality rate for patients with clinically evident tetanus is still 60%.

We strongly urge all physicians in Missouri to inquire into the tetanus immunization status of their patients on routine office visits. If the primary series has not been accomplished, it would be in the best interest of the patient to initiate or complete the primary immunization series of tetanus. This is of particular importance in Missouri because of our relatively high rate of tetanus over the past ten years and the high fatality rate once clinical tetanus occurs.

References

1. D.H.E.W., Center for Disease Control, Reported Morbidity and Mortality in the United States, Annual Summary 1977 issued September 1978.
2. Faust, R. A. *et al:* Tetanus: 2449 Cases in 68 Years at Charity Hospital. J. Trauma 16:704-712, 1976.
3. D.H.E.W., Center for Disease Control, Tetanus Surveillance, 1970-71 Summary, Report No. 4, March 31, 1978.
4. Furste, W.: The Fourth Internation Conference on Tetanus, Dakar. Senegal, 1975 (editorial). J. Trauma 16:755-757, 1976.
5. Berger, S. A. *et al:* Tetanus Despite Pre-existing Antitetanus Antibody JAMA. 240:769-770, 1978.
6. Peebles, T. C. *et al:* Tetanus Toxoid Emergency Boosters. NEJM 280:575-581, 1969.

JEAN RENÉ DUPONT, M.D., *Sikeston*

Blunt Trauma With Delayed Femoral Artery Occlusion

Case Report

In CIVILIAN SERIES of peripheral arterial trauma, the reported incidence of common femoral artery injuries of all types ranges from 8.2% to 1.5%. Among these, blunt trauma to the femoral artery is most unusual.[1] It is difficult, however, to assess the true incidence because blunt injuries in the literature are often included with penetrating superficial femoral artery trauma, which are among the most common peripheral arterial injuries. A total of only 34 civilian cases of blunt femoral artery trauma are reported in the English literature, confirming the relative rarity of this injury.[2]

An unusual feature of blunt arterial trauma is its tendency to manifest late. Indeed, it may be entirely missed during the initial evaluation. Crush njuries have the poorest prognosis of all arterial rauma.[3]

Following is a report of a case of blunt trauma to he right inguinal region which caused delayed occlusion of the right femoral artery some 18 days ater. The arterial injury, although looked for, was not apparent during the initial period of observation in the hospital. This case points out the sometimes elusive association between blunt trauma nd arterial injury.

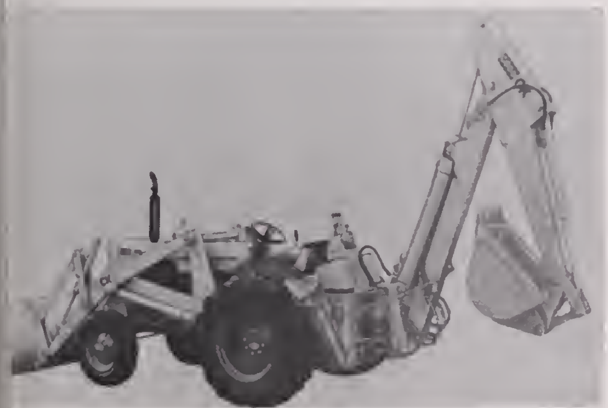


Fig. 1 The backhoe.

Blunt trauma is an uncommon form of arterial trauma. Since it is particularly rare in the region of the common femoral artery, it frequently is unrecognized. Arteriography may be helpful in making such a diagnosis as demonstrated in this case report of a man who sustained blunt trauma to the right groin.

Dr. Dupont is in the private practice of surgery.

CASE REPORT

A 49-year-old, white laborer was crushed by a backhoe (a large, automatic-type shovel) (Fig. 1). The point of maximum impact was the right lower abdominal quadrant, hip and groin. The patient was a heavy cigaret smoker, but he had no other significant medical history.

Physical examination revealed an area of erythema in the right lower quadrant, hip and over the right buttock where he had been pinned between the backhoe and a wall. He had a pulse in the right femoral area and foot. There were no other apparent injuries. Roentgenograms showed no fractures. Results of usual laboratory tests were normal.

The patient was in considerable pain when admitted to the hospital for observation for four days. Upon discharge, he complained only of pain in the right hip. This was his sole complaint when seen in the office a week later. Two weeks after his injury, he began to experience pain in the right leg. His right femoral pulse was weaker than the left, but it was not until three weeks after injury that signs and symptoms of arterial insufficiency in the right lower extremity became apparent with loss of right femoral and pedal pulses. Typical intermittent claudications developed in the right leg. He was then readmitted to the hospital and a translumbar aortogram (Fig. 2) demonstrated occlusion of the right external iliac and common femoral artery. The left leg was normal.

An extraperitoneal approach was taken to the right iliac vessels by extending the incision into the upper thigh for control of the femoral bifurcation. There were

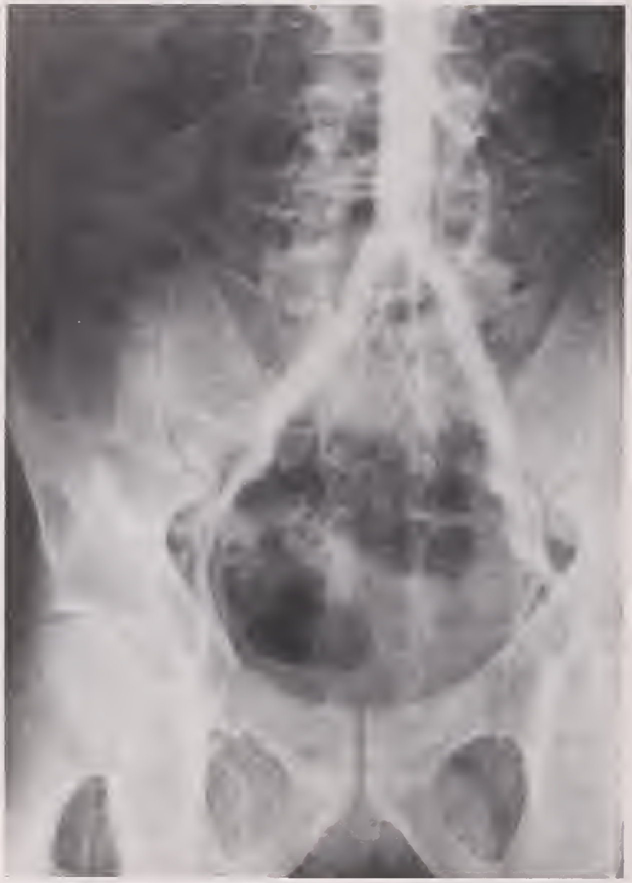


Fig. 2 Translumbar aortogram shows occlusion of right external iliac artery with excellent collateral circulation. Collateral supply probably was developed before injury as a consequence of patient's preexisting arteriosclerotic vascular disease.

several large arteriosclerotic plaques in the external iliac artery, proximal to the obstruction. An 8 cm long segment of artery was resected and replaced with an 8 mm knitted, dacron tube graft end to end. The point of intimal disruption was beneath the inguinal ligament approximately 5 cm above the common femoral artery bifurcation.

Sections of the artery showed disruption through both intima and media lifting those layers off the adventitia. There was some organization of the overlying thrombus. Histologic evidence of preexisting arteriosclerosis of the vessel was present. Pulses developed in his right lower extremity postoperatively and the patient has subsequently returned to work. There has been no evidence of arterial insufficiency of his lower extremities postoperatively.

DISCUSSION

Common femoral artery injuries are of sentimental value to the vascular surgeon because of their historical significance. The first successful end-to-end anastamosis of an artery in man was a repair of such an injury by Murphy in 1896.[4] While sharp arterial trauma especially to the groin is common, blunt arterial trauma with occlusion is rare and frequently goes unrecognized. Only a small number of cases such as ours have been reported.

Arteriography may be useful in patients being evaluated for blunt trauma.[5] It is often unnecessary in penetrating injuries. Notable ischemia distal to the injury is observed in only one fourth of all patients with arterial injuries to the extremities. Because of the excellent collateral supply in the upper extremities, a period of watchful delay may be permissible when dealing with injuries to that region. However, action should be prompt when arterial injuries of the lower extremities occur where the collateral blood supply is less adequate.

One of the intriguing aspects of blunt trauma is the fact that disruption of the arterial wall may be incomplete. This is sometimes referred to as "intimal fractures."[6] Fraser treated a patient who had a glancing blow to the left groin from a 60 lb metal cast[7] and in whom symptoms developed immediately. The intima in this case had retracted within the adventitia, and the external appearance of the blood vessel wall at surgery was deceptively normal. In these patients, the intramural hematoma formation and a limited intimal fracture may not cause immediate cessation of blood flow as was the case in our patient. An artery which appears to be constricted at operation should be explored because an appearance of unbroken continuity in such cases may be misleading. It must be emphasized that the morbidity o conservative treatment is considerable. An overall amputation rate as high as 12% has been reported by Hughes (1958) in the Korean Conflict In Viet Nam, the frequency was 15%, making this second only to popliteal injuries with a rate o 30%. The critical importance of the femoral artery and the frequency of subsequent wound complications are the reason for these dismal statistics in acute femoral artery trauma.

Undoubtedly, the most common cause of blunt arterial injury more distally in the extremities is fracture.[8] However, Bassett and Silver[9] described complete obstruction of the common femoral artery produced by disruption of the sacroiliac join and a fracture of the pubis not unlike the injuries to the carotid artery and its branches seen with contusions of the neck and fractures of the mandible.[10]

The causes of blunt femoral artery trauma described in the literature include football helmets motorcycle handle bars, compression by a truck

The Upjohn Company
announces
a new
indication for
Motrin®
(ibuprofen)

A well-tolerated, nonnarcotic prescription for pain
Motrin tablets
400 mg
Sig T q 4-6 h
prn
pain
No. 364-936
Mr. R. Mayer
Motrin 40
ibuprofen
One (1)
as necess

© 1979 The Upjohn Company

Motrin now proved an effective analgesic for mild to moderate pain

Motrin 400 mg provided greater relief of pain than did propoxyphene 65 mg in controlled clinical pain studies.

Time after drug administration (hour)		.5	1	2	3	4
Mean relief-of-pain scores* (No. patients reporting)	Motrin 400 mg ibuprofen	.89 (108)	1.25 (108)	1.36 (108)	1.28 (107)	1.19 (106)
	Darvon 65 mg propoxyphene	.66 (100)	.99 (99)	1.13 (96)	.99 (96)	.80 (96)
Statistical significance		$p<0.02$	$p<0.01$	$p<0.05$	$p<0.02$	$p<0.002$

*0 = No relief 1 = Partial relief 2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

Motrin 400 mg TABLETS
ibuprofen, Upjohn

- Not a narcotic • Not addictive • Not habit forming
- Rapid analgesic action • Indicated in acute and chronic pain
- Well tolerated. The most common side effect with Motrin is mild gastrointestinal disturbance.

Please turn the page for a brief summary of prescribing information.

Upjohn

Motrin® (ibuprofen)
now proved an effective analgesic for mild to moderate pain

Motrin® Tablets (ibuprofen, Upjohn)

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin:* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,* epigastric pain,* heartburn,* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,* headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Rheumatoid and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain.

Do not exceed 2400 mg per day.

Caution: Federal law prohibits dispensing without prescription.

For additional product information, see your Upjohn representative or consult the package insert.

MED B-4-S

Upjohn THE UPJOHN COMPANY
Kalamazoo, Michigan 49001 USA

7280-4

August, 1979

ALDORIL®
ALDORIL®
ALDORIL®
containing methyldopa and hydrochlorothiazide

TABLETS
ALDORIL®-25
containing 250 mg ALDOMET® (Methyldopa, MSD)
and 25 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL®-15
containing 250 mg ALDOMET® (Methyldopa, MSD)
and 15 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL® D30
containing 500 mg ALDOMET® (Methyldopa, MSD)
and 30 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL® D50
containing 500 mg ALDOMET® (Methyldopa, MSD)
and 50 mg HydroDIURIL® (Hydrochlorothiazide MSD)

Merck Sharp & Dohme, Division of
Merck & Co., Inc., West Point, PA 19486

MSD
MERCK
SHARP&
DOHME
J9AR13

Copyright © 1979 by Merck & Co Inc

against a rigid wall,[6] the tail light or fin of an automobile[11] and blast effects from gunshot wounds.[12] Today, iatrogenic injuries during femoral artery catheterization undoubtedly account for many of the injuries which may cause intimal dissection of the common femoral artery, but surgical operations such as herniorrhaphy[13] and varicose vein surgery[14] have also been implicated. All of these may, with some justification, be classified as a variant of nonpenetrating or "blunt" trauma. An unusual case is that of Keley[15] who reported a bullet embolus to the common femoral artery in a patient who had sustained a gunshot wound to the thoracic aorta.

Delayed arterial occlusion after blunt trauma is not common. Blunt cervical trauma may be associated with thrombosis of the internal carotid artery, which will produce neurological symptoms a few hours after the insult.[16] There may or may not be an intimal fracture. Our patient's arteriosclerosis possibly could make him more susceptible to intimal tears.

An interesting feature of blunt arterial trauma is the direction of the "injuring force." In contrast to penetrating injuries, the maximum insult occurs in the intima and decreases towards the adventitia.[17]

Three stages were recognized by Sencert[18] as follows:

1. The intimal tear which causes neither bleeding nor peripheral ischemia.
2. The intimal and medial tears which usually do not bleed but can cause arterial thrombosis with peripheral ischemia and which, in the major arteries, have been known to produce post-traumatic aneurysms[19] at a later time.
3. The most severe degree of blunt trauma causes complete destruction of an extensive segment of the arterial wall. The adventitial envelope often retracts for several centimeters and bleeding usually results from the major arteries before they can occlude.

Our patient displayed several features which are characteristic of blunt as compared to penerating arterial trauma. They include the followng:

1. Frequent absence of an external wound.
2. Peripheral ischemia rather than bleeding dominates the clinical picture. The ischemia is often delayed.
3. Diagnosis is difficult to make especially when there are other severe injuries such as fractures.
4. Arterial wall damaged over an extensive segment, making bypass or graft replacement rather than direct suture the operative repair of choice.[20]

"Arteriospasm" in an artery which has sustained blunt trauma must always be suspect. It is a diagnosis of exclusion which must be made only after exploration or arteriography. Traumatic arteriospasm is extremely rare by today's standards.

Our patient was a smoker with evidence of moderately advanced aortoiliac occlusive disease. This may have helped him tolerate his acute arterial occlusion better than most, causing delayed recognition.

REFERENCES

1. Rich, N. M., Hobsan, R. W. II, Fedde, C. W. and Collins, C. J. Jr.: Common Femoral Arterial Trauma. J. Trauma 15 (8):628-637.
2. Rich, N. M., and Spencer, F. C.: Common and Profunda Femoral Artery Injuries. Vascular Trauma. Philadelphia and London, W. B. Saunders Company, Chapter 22, 494-596.
3. Dillard, B. M., Nelsan, D. L. and Norman, H. G. Jr.: Review of 85 Traumatic Arterial Injuries. Surgery, 63:391-395, 1969.
4. Murphy, J. B.: Resection of Arteries and Veins Injured in Continuity and During Suture. Experimented and Clinical Research. Med. Rec. 51:73-88, 1897.
5. Drapanas, T., Hewitt, R. L., Weichert, R. F. and Smith, A. D.: Civilian Vascular Injuries. A Critical Appraisal of Three Decades of Management. Ann. Surg. 172:351-360, 1970.
6. Matthews, G. B. and Buzzi, A.: Acute Obstruction of the External Iliac Artery Due to Circumferential Intimal Fracture. J. Cardiovasc. Surg. 6:422-425, 1965.
7. Fraser, G. A.: Closed Traumatic Rupture of the Common Femoral Artery. Am. Surg. 161:539-544, 1965.
8. Riley, Wm.: Vascular Injuries Complicating Fractures. Am. Surg. 25:115-122, 1959.
9. Bassett, F. H. and Silver, D.: Arterial Injury Associated With Fractures. Arch. Surg. 92:13-18, 1966.
10. DiStephano, J. F., Maimon, W. and Mandel, M. A.: False Aneurysm of the Lingual Artery. J. Oral Surg. 35:918-920, 1977.
11. Gryska, P. F.: Major Vascular Injuries; Principles of Management in Selected Cases of Arterial and Venous Injuries. NEJM 266:381-385, 1962.
12. Williamson, G. D.: Peripheral Vascular Trauma. Amer. J. Surg. 116:725-730, 1968.
13. Smith, R. F., Szilagy, D. E. and Pfeifer, J. R.: A Study of Arterial Trauma. Arch. Surg. 86:825-835, 1963.
14. Owens, J. C.: The Management of Arterial Trauma. Surg. Clin. N. Am. 43:371-385, 1963.
15. Keley, J. L.: Bullet Embolus to the Left Femoral Artery Following a Thoracic Gunshot Wound. J. Thor. Surg. 21:608-620, 1951.
16. Towne, N. E., Neis, D. D. and Smith, J. W.: Thrombosis of the Internal Carotid Artery Following Blunt Cervical Trauma. Arch. Surg. 104:565-568, 1972.
17. Linder, F. and Vollmar, J.: Der Augenblickliche Stand der Behandlung Von Schlagader Verletzungen und ihrer Folgezustände. Chirurg 36:55-63, 1965.
18. Sencert, L.: Wounds of Blood Vessels, Univ. London Press, 1918.
19. Learmonth, J. R.: Surgery of Blood Vessels. Edinburgh Med. J. 47:225-240, 1940.
20. Morris, G. C., Greech, O. Jr. and DeBakey, M. E.: Acute Arterial Injuries in Civilian Practice. Amer. J. Surg. 93:565-572, 1957.

Reprints: Jean René Dupont, M.D.
P.O. Box 1068
1012 N. Main
Sikeston, Mo. 63801

MICHAEL D. JENSEN, M.D. *and*
C. KENNETH McALLISTER, M.D., *Kansas City*

Antibiotic-Associated Pseudomembranous Colitis

FOR MANY YEARS, diarrhea and pseudomembranous colitis (PMC) have been associated with various antibiotics, including clindamycin, lincomycin, chloramphenicol, ampicillin, tetracyclines and others.[1] The diarrhea has been reported to range from mild, self-limited diarrhea to fulminant, fatal PMC.

The incidence of diarrhea and PMC associated with clindamycin, apparently the major offender, has been variably reported. Tedesco reported 20% diarrhea and 10% PMC in a prospective study in 1974,[2] while the Cooperative Antibiotic Diarrhea Study Group (CADSG) in Canada reported in 1976 an 18% diarrhea and 2% PMC incidence with clindamycin.[3] They also found a 5% incidence of diarrhea and 0.3% incidence of PMC with ampicillin. Both of these studies were basically inpatient investigations. Another large study done prospectively reported a 6.6% incidence of diarrhea with clindamycin and 0.3% incidence of significant morbidity from diarrhea.[4] Because of the large numbers of patients and mixed inpatient and outpatient nature of the study, however, no incidence of PMC could be calculated.

Several factors have been reported to have been statistically, significantly associated with clindamycin use and PMC. In various papers, however, there have been different associations. The CADSG found a proportional increase in diarrhea with age. Twenty-four percent of those patients over age 50 and 46% of those over age 60 had diarrhea associated with clindamycin therapy. Swartzberg and his colleagues[4] also found a higher incidence of diarrhea in the older age groups, but it was only significant when divided between those over 20 years old and those under 20 years old. Tedesco did not comment on this aspect. Tedesco and Swartzberg found a higher incidence of PMC and diarrhea respectively with oral clindamycin administration, while the CADSG found a much higher incidence with intravenous use. One of the studies[4] concluded that women more frequently had diarrhea with clindamycin use, but this was not supported by the other two studies.

Antibiotic-associated diarrhea cannot be differentiated into PMC versus non-PMC diarrhea on the basis of symptoms.[2,3] Symptoms include cramping, hypogastric pains and fever, usually less than 38.9 C (102 F). The onset of these symptoms and the diarrhea may be during the course of therapy, most commonly on the fourth through the ninth day after starting clindamycin, or after the therapy has been stopped, usually within five to eight days.[2]

Laboratory findings in PMC may include anemia, leukocytosis with a left shift and hypoalbuminemia. Stools are negative for ova and parasites, fungi and pathogenic bacteria and are sometimes grossly bloody.[5]

Sigmoidoscopic examination is diagnostic for PMC. Findings include hyperemic mucosa, edema, moderate friability and granularity, which are nonspecific and may be found in the absence of pseudomembranes.[6] The pseudomembranes are yellow to white, raised, flat, plaque-like lesions, 1 ml to 5 ml in diameter, which may become confluent in the later stages of the disease. It is important to attempt to wipe the mucus and stool off the bowel wall for they may hide pseudomembranes. If a biopsy is taken, one has to be sure the specimen contains the entire pseudomembrane because it is attached only to the mucosa in one place. For proper pathologic interpretation, one needs to see this area.[5] The rectal biopsy should show acute inflammation, pseudomembranes, focal or superficial ulceration.

A barium enema may be helpful in the diagnosis, but it is probably more important in following the course of the disease. It should not be substituted for a proctoscopic examination. Common findings include irregularity of the mucosa, ulcerations, cobblestone appearance, loss of haustral markings and, sometimes, thumbprinting, especially on the right side of the colon. The ileum is characteristically normal.[5] All patients who recover appear to have normal follow-up studies, although some patients may require six months for the colon to return to normal.

The course of PMC is quite variable. Patients may have from eight to 30 stools per day, ranging from watery stools to frankly bloody diarrhea. Indeed, one patient in the Canadian study, who died of other causes, was found to have PMC at autopsy with no clinical recognition of diarrhea. The duration of the disease may be from four days to four weeks.

Tedesco[2] found a longer duration of diarrhea in those patients whose diarrhea began after a full course of clindamycin or if they were continued on the drug despite the diarrhea. He reported that if the diarrhea began during the course of therapy and the clindamycin was discontinued, the diarrhea stopped within one week. Similar results were seen in the CADSG study, although they were not as striking. The patients with prolonged diarrhea were the ones more likely to have the complications of electrolyte disturbances and hypoalbuminemia.

Although some initial reports estimated the mortality rate from PMC at 50% to 75%, the death rate seems to be much lower with better documentation of the disease. Of 20 patients with PMC in Tedesco's study, none died of colitis, while in the CADSG study, 14 of 44 patients with PMC died. However, in only two of these was the death thought to be related to the diarrhea, one requiring a colectomy.

Many theories have been proposed to explain the diarrhea and PMC seen with antibiotics. Some of these have included overgrowth of *Staphylococcus aureus*, *Pseudomonas aeruginosa* and various fungi. Immunologic reactions to the antibiotics have been proposed because of the occasional favorable response to glucocorticoids or ACTH.[7] A direct toxic effect of the drug on the colon and viral etiologies have also been suggested.

Recently, several authors have implicated a clostridial toxin neutralized by *Cl. sordellii* antitoxin as a cause of PMC.[8, 9] Bartlett[8] has recovered such a toxin from patients with PMC that is cytotoxic and causes PMC in hamsters. *Cl. difficile*, not *Cl. sordellii*, was recovered from the stools of these patients. Both the supernatant of the cultures and the organisms themselves caused PMC in hamsters. The effect was neutralized by gas-gangrene antitoxin, whose spectrum included *Cl. sordellii*. It has also been found that *Cl. difficule* toxin cross-reacts with *Cl. sordellii* toxin in neutralization by antitoxin. *Cl. sordellii* has never been recovered from the stool in experimental PMC.

Antibiotic-associated colitis has plagued physicians for many years. Recently, the diagnostic features, course of the disease, probable cause and rational therapeutic approaches have been well defined. Most interesting is the implication of a clostridial toxin as the causative agent for pseudomembranous colitis. This explains many of the previously noted features of the disease and has led to proper and curative therapy once the entity is recognized.

The authors are from the University of Missouri-Kansas City School of Medicine. Dr. McAllister is Assistant Professor of Medicine and Infectious Diseases and Docent.

It now seems likely that these antibiotics allow the overgrowth of *Cl. difficile* or a close relative, which produces a toxin which causes PMC. If this were true, one would expect that another antibiotic to which the organism is sensitive would prevent the antibiotic-associated PMC. This seems to be the case. Bartlett reports protection from clindamycin colitis by oral vancomycin in hamsters.[10] This theory would also make it likely that agents to decrease the diarrhea by decreasing bowel motility, such as atropine-diphenoxylate (Lomotil), would have an adverse effect by allowing prolonged contact of the organism and its toxin with the bowel wall. This, too, has been reported.[11]

This theory would not be inconsistent with the finding of prolonged diarrhea if it begins after clindamycin therapy is completed, or if the drug is continued despite diarrhea as opposed to if it is discontinued at the onset. If clindamycin is indeed a factor allowing *Cl. difficile* to overgrow and, thus, cause PMC, then early removal at the onset would reverse this favorable factor. If, on the other hand, diarrhea begins after a full course of therapy, one might postulate that during the course of therapy, the *Cl. difficile* have been multiplying and, perhaps, have a sufficient foothold to continue to proliferate despite the discontinuation of the clindamycin and, thereby, cause a prolonged diarrhea until the bowel clears the toxin. Why diarrhea develops early in some patients and late in others may be a function of varying individual sensitivities to the toxin, varying toxin production by the bacteria, fewer numbers of organisms initially present in the colon or concomitant resistance of less pathogenic bowel flora to the antibiotic.

This theory would also explain why some patients get PMC with antibiotics and others do not. Either they do not have the pathogenic clostridia in their bowels to begin or they have other, more hardy organisms, also resistant to the antibiotic being used. The wide variations in prevalance of PMC in different geographic areas has also been noted[3, 4] and may be a function of the availability of the organism in question in the environment.

There would seem to be no reason that intravenous versus oral clindamycin would give different incidences of PMC, although different authors have given two entirely different results. Clindamycin is well absorbed orally, so excess bowel concentrations are probably not a factor. It may be an artifact of the studies in that they did not have enough cases of PMC to make a valid statistical analysis.

A rational approach to therapy in light of this recent information would include specific therapy, oral vancomycin, directed at the offending microorganism. In addition, something, such as cholestryamine, to assist in removing the *Cl. difficile* and its toxin as rapidly as possible might be of value. However, controlled studies are necessary. Fluid and electrolyte therapy as needed and perhaps albumin replacement, if losses are being poorly tolerated, may be necessary in severe cases. These latter two steps hopefully will not be necessary with early recognition and specific treatment. Lomotil and prednisone do not seem to be indicated.

In summary, the etiologic agent for antibiotic-associated PMC seems to have been uncovered. It has not yet proved to be the explanation for antibiotic-associated diarrhea which, although much less serious than PMC, is much more common. With early recognition, which requires knowledge of the antibiotics and the patients likely to be at risk, this could become a relatively simple disease to treat.

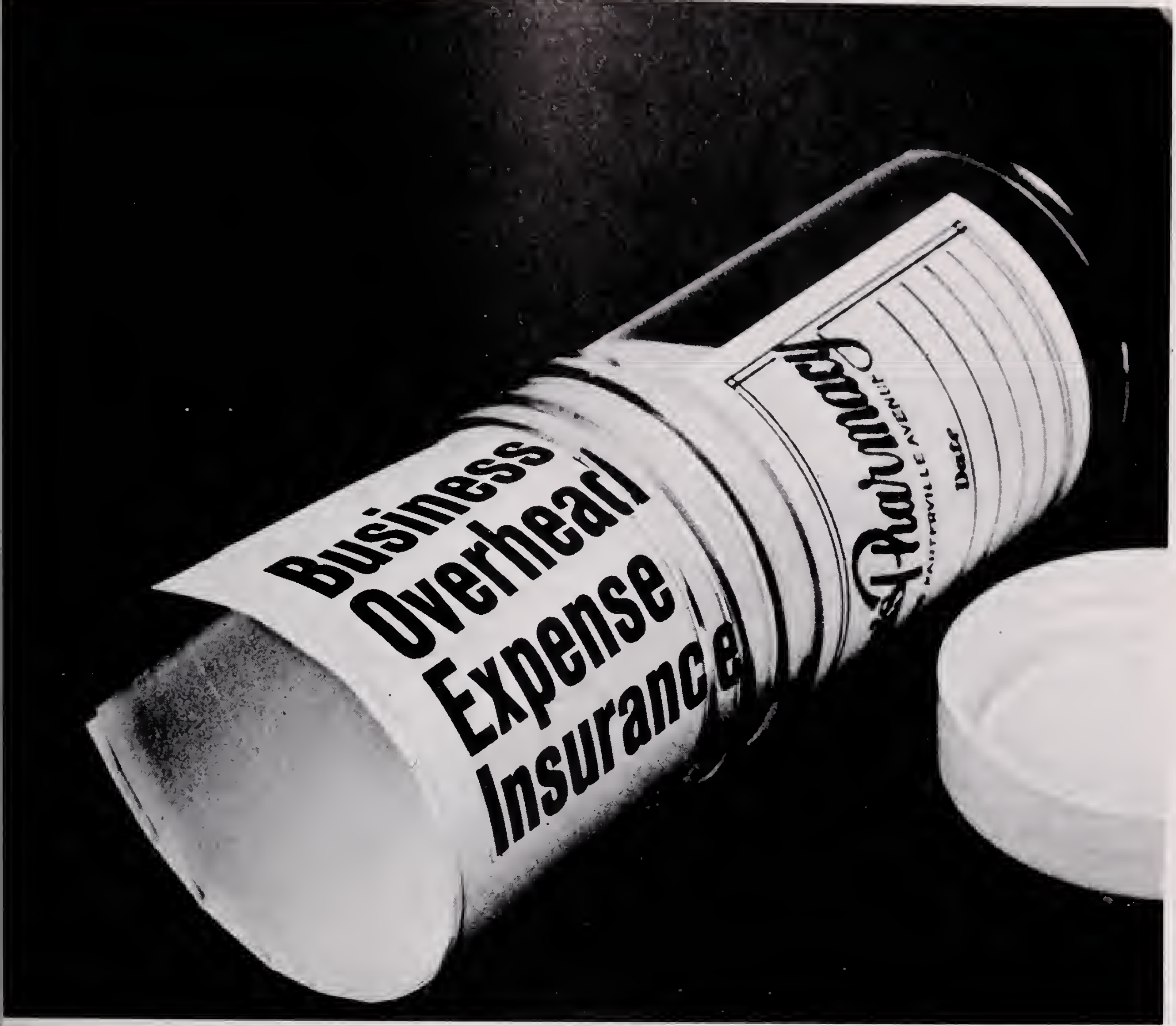
REFERENCES

1. Harrison's Principles of Internal Medicine, 1977: pg. 1552.
2. Tedesco, F. J., Barton, R. W. and Alpers, D. H.: Clindamycin-Associated Colitis. A Prospective Study. Ann. Int. Med. 81:420, 1974.
3. Gurwith, M. J., Rabin, H. R. and Lave, K.: Diarrhea Associated With Clindamycin and Ampicillin Therapy: Preliminary Results of a Cooperative Study. J. Infect. Dis. 135:S104, 1977.
4. Swartzberg, J. E., Maresca, R. M. and Remington, J. S.: Gastrointestinal Side Effects Associated With Clindamycin. Arch. Int. Med. 136:876, 1976.
5. LeFrock, F. L., Klainer, A. S., Chen, S., Gainer, R. B., Omar, M. and Anderson, W.: Spectrum of Colitis Associated With Lincomycin and Clindamycin Therapy. J. Inf. Dis. 131:S108, 1975.
6. Tedesco, F. J., Stanley, R. J. and Alpers, D. H.: Diagnostic Features of Clindamycin-Associated Pseudomembranous Colitis. N. Engl. J. Med. 290:841, 1974.
7. Causey, J. Q.: Clindamycin-Associated Pseudomembranous Colitis Treated With Prednisone. Southern Med. J. 69:372, 1976.
8. Bartlett, J. G., Chang, T. W., Gurwith, M., Gorbach, S. L. and Onderdonk, A. B.: Antibiotic-Associated Pseudomembranous Colotis Due to Toxin-Producing Clostridia. N. Engl. J. Med. 298:531, 1978.
9. Larson, H. E., and Price, A. B.: Pseudomembranous Colitis: Presence of Clostridial Toxin. Lancet 2:1312, 1977.
10. Bartlett, J. G., Onderdonk, A. B. and Cisneros, R. L.: Clindamycin-Associated Colitis in Hamsters: Protection From Vancomycin. Gastroenterology 73:772, 1977.
11. Novak, E., Lee, J. G., Seckman, C. E., Phillips, J. P. and DiSanto, A. R.: Unfavorable Effect of Atropine-Diphenoxylate (Lomotil) Therapy in Lincomycin-Caused Diarrhea. JAMA 235:1451, 1976.

The Third National Conference on Medical Care and Health Services in Correctional Institutions will be held here Nov. 9-10, 1979, at the Radisson Hotel in Chicago. The conference is sponsored by the American Medical Association in cooperation with the American Correctional Health Services Association and will feature Congressman John B. Anderson (R-Ill.) as keynote speaker.

Several workshops will promote the conference theme of "New Directions for Health Care in Correctional Institutions," presenting proven models for health care delivery and addressing the issue of standards implementation and certain legal aspects of the program.

The AMA has developed three separate sets of standards in health care, one each for jails, prisons and juvenile facilities. Copies will be available to conference participants.



A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance
Company, Newark, New Jersey

James

Fred S. James & Co. of Missouri, Inc.

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

Missouri State Medical Association Announces

Winter/Spring 1980 INTRAV Adventure Programs

The Missouri State Medical Association and INTRAV are pleased to offer these outstanding travel programs in 1980. On the South American and Spain/Portugal Adventures, INTRAV will again be conducting Medical Seminars for Category II, CME credit. If you are interested in further details, please contact the Missouri State Medical Association office.

Around The World Adventure

Thirty-Five Days $ 7995
Departing January 29, 1980

Enjoy summer down under when it's winter back home on the ultimate travel experience...a 35-day trip to four continents and eight of the world's most interesting countries: **Christchurch** and **Queenstown, New Zealand; Sydney, Australia; Bali, Indonesia; Singapore; Kuala Lumpur, Malaysia; Nairobi, Kenya; Cape Town** and **Johannesburg, South Africa** and **Rio de Janeiro, Brazil.** You'll circle the globe following the sun with **no overnight flights,** and plenty of time to unpack and relax.

Every feature of our Around The World Adventure is the very finest, from hotels and restaurants to all the extra attention for which INTRAV is famous. Enjoy the exclusive privilege of a sunset cocktail party on the terrace of the Sydney Opera House overlooking one of the world's most beautiful harbors...sip Singapore Slings in the historic Raffles Hotel...feast on barbecue at a South African Sundowner Evening, plus much more. Few individuals ever experience a travel adventure of this magnitude...don't miss it.

South American Adventure

Eleven Days $1258
Departing February 14, 1980

Leave winter behind, escape on an Adventure to the Land of the Incas.

First, five days in **Lima, Peru.** Five thousand years of culture are preserved in its museums, as well as dazzling collections of gold and silver. Shop for alpaca wall hangings, handloomed rugs and native carvings. The new Lima Sheraton, in the heart of this cosmopolitan city, is close to it all.

Join an optional excursion to **Machu Picchu,** Lost City of the Incas. The majesty, the enormity, the breathtaking surroundings, make this an unforgettable travel experience.

Then, five days in **Quito, Ecuador,** City of Eternal Spring. Stay at the Quito Colon International, where rooms overlook the snow-capped Andes. Stroll cobblestone streets and shop for handwoven ponchos. Stand with one foot in each hemisphere while tip-toeing on the Equator or test your hand at bullfighting.

Join us for an informal holiday in the warm south-of-the-Equator sun. South America...it's undiscovered, unexpected and so close to home.

Spain/Portugal Adventure

Fourteen Days
From Kansas City $1859
From St. Louis $1789
Departing April 25, 1980

Get away to spring in the sparkling lands of Iberia...Lisbon, the Costa del Sol and Madrid.

Your exclusive INTRAV group is limited to just 90 passengers on this new itinerary bringing you the best of the unspoiled Iberian Peninsula.

Discover **Lisbon**...it's the click of fiery flamenco heels, the oles of bullfights, the haunting sounds of the Fado Singer. Try gazpacho, paella and fine port wines. Take side excursions to unspoiled fishing villages and ancient towns: Obidos, Sintra, Nazare and Estoril. Then relax on the sunny Mediterranean beaches of the Costa del Sol at **Torremolinos** and take an optional excursion to **Seville.** Explore the Prado in **Madrid,** with optional excursions to El Escorial, the Alhambra in Granada. Avila, Segovia and the Moorish walls of Toledo. Sightsee, shop, nightclub or just relax. The choice is yours. Join us in Iberia.

Send to: Missouri State Medical Association
P.O. Box 1028
Jefferson City, Missouri 65102

☐ Enclosed is my check for $______ ($300 per person Around The World: $100 per person South America and Spain/Portugal) as deposit on ________________ Adventure.

☐ Please send more information.

Names ____________________________

Address ____________________________

City __________ State __________ Zip ______

Space Strictly Limited — Make Reservations Now

Non-Regimented INTRAV Deluxe Adventures

President's Message

In mid-September, I was visited by Michael Maslowsky, special assistant to Gov. Joseph P. Teasdale. Mr. Maslowsky was asking for the input of the MSMA in relation to the establishing of an Office of Rural Health in Missouri by Governor Teasdale.

The governor, in a speech to a group in Springfield in August, proposed the establishment of such an office "to provide technical skill and assistance to communities seeking improved health care." As outlined in his speech, the objectives of the office would be to:

1. Develop community-based health systems providing primary care, encouraging a joint-practice approach by family practice physicians and specially trained nurses practicing expanded roles.
2. Investigate the potential of alternative systems and new health care technology.
3. Encourage preventive medicine through educational efforts and programs.
4. Insure a balanced team concept approach to health care delivery.

The office could theoretically provide assistance in physician recruitment, training in medical practice management, assistance in the design and construction of clinics, planning and development of medical education programs and the study of the impact of transportation and energy on rural health care.

Andrew McCanse, M.D.

Such offices now exist in North Carolina, Tennessee and Colorado and one is being formed in Arkansas. Whether the office would be directly under the governor and, therefore, subject to political changes or a part of the Division of Health would have to be worked out. At any rate, the governor is asking for our input.

In addition, Mr. Maslowsky has asked for our assistance in the implementation of Senate Bill 293 which would provide funding for residents in family practice and general rotating internship. The State Board of Health would administer this program, which passed the legislature with the endorsement of the MSMA. At the last minute in the legislative session, there was some turmoil in regard to the fact that the osteopathic physicians wanted to include general rotating internships as part of the groups to be funded. The Academy of Family Physicians does not believe that rotating internship is adequate training to enter family practice and discouraged the amendment to the original bill. However, the act is now law and the MSMA is being asked to help implement it.

The final area in which the governor's office is interested in our thoughts is in considering the role of nurses. The question of supervision of nurse practitioners came up and I related the position of the MSMA, which is that close supervision of nursing or other non-physician personnel who carry out the directives of physicians is necessary for quality medical care to be delivered. The governor has asked that the State Board of Registration for the Healing Arts meet with the Nursing Board to consider this matter.

I told Mr. Maslowsky that the MSMA will be happy to cooperate with the governor in working on all of these and other problems as seems appropriate. The fact that the governor has asked for our participation in these important matters is a very healthy sign for the future.

FOUNDED 1924
AUXILIARY TO THE MISSOURI STATE MEDICAL ASSN.

MSMA Auxiliary

Mrs. Rudy Ruhling
President

"Unless we think of others
and do something for them,
we miss one of the greatest
sources of happiness."

I am happy to present Mrs. Donald C. Sanders of Kansas City as a guest columnist this month. She is chairman of the Auxiliary's AMA-ERF Committee and has much to tell you about its important activities.

Dear Doctors:

The American Medical Association Education Research Foundation, the only fund-raising function of the AMA Auxiliary, is under way with a new year of excitement.

Our situation is unusual in that we have two deadlines for periods of money distribution or recognition. On June 1, we started the new year for the AMA Auxiliary and are counting toward the next July convention where state and county auxiliaries are recognized for their work. December 15 is the cut-off date so that distribution can be made to medical schools in March. April 1, however, is the cut-off date for the state books so that recognition can be given to the county auxiliaries. A little pat on the back helps one to work harder for the "winning team" the next time.

We seek your support for the AMA-ERF through your county auxiliary. We realize that each of you receives a letter from the AMA requesting a donation several times a year. We would like to suggest and encourage you to make your donation through your county auxiliary and specify a medical school or guaranteed loan fund. Please support your auxiliaries in their special projects as they seek to ensure additional, much-needed funds for medical schools, research and scholarships.

As state AMA-ERF chairman again this year, I look forward to an even more successful year. We do appreciate the help you gave us in making the First Annual Benefit Auction such a success and know that the auction this year will be even better. Please start thinking and planning for it now. The year 1980 must be bigger and better for medicine.

Mrs. Donald C. Sanders
AMA-ERF Chairman

American Medical Association
Continuing Medical Education
AWARD

MSMA Members Receive Physician's Recognition Award

Two hundred and sixty-eight MSMA members qualified for the MSMA-AMA Physician's Recognition Award during the period of Jan. 1-Aug. 17, 1979.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in MISSOURI MEDICINE as they are received from the AMA.

January through February, 1979

Rushdy Abadir, Columbia
Jaime A. Aguinaldo, St. Louis
James O. Alyea, Columbia
Don L. Andrus, Poplar Bluff
Richard H. Ashby, St. Louis
Colita L. R. Banez, St. Louis
Mohammad F. Bashiti, St. Louis
Leonard Berg, St. Louis
James W. Bernard, Caruthersville
Olga M. Blair, St. Louis
James H. Butt, Columbia
Nazar Chand, Poplar Bluff
Jean A. Chapman, Cape Girardeau
Mary C. Colglazier, Kansas City
James R. Cook, Springfield
Eleana Q. Danganan, St. Louis
Joseph M. Dugan, St. Louis
John E. Ervin, Kansas City
Corinne Farrell, Columbia
J. Will Fleming, Moberly
Eric J. Flug, St. Louis
Anthony P. Friedrich, Creve Coeur
Joseph Gagliardo, Clayton
Ernesto M. Gapasin, Lebanon
Larry F. Glaser, Kansas City
Robert L. Grubb, St. Louis
Gregory L. Hartman, Kansas City
Estrella Horrilleno, St. Louis
Karl A. Jacob, St. Louis
Philip G. Kaul, Kansas City
Pierre W. Keitges, Kansas City
Frederick T. Kraus, St. Louis
Theodore Krupin, St. Louis
Il Taik Lim, St. Louis
Albert C. Malles, St. Louis
James D. Maltby, Columbia
John M. Mezoff, Columbia
Larry D. Mosby, Columbia
Gary H. Myers, St. Louis
Venkata G. Naidu, St. Louis
George C. Olive, Neosho
Frank A. Palazzo, St. Louis
Larry D. Paskar, St. Louis
Jaykrishna S. Patel, Poplar Bluff
Joseph R. Payne, Kansas City
Meredith C. J. Payne, St. Louis
Richard L. Payne, St. Louis
Edward G. Peskin, University City
Joseph A. Pinkerton, Kansas City
Jeanne E. L. Reiss, Kansas City
George E. Roulhac, St. Louis
Sidney W. Scorse, Neosho
John J. Sheridan, St. Louis
Ronald G. Shriver, Cape Girardeau
James C. Sisk, Clayton
Barbara C. Spies, Kansas City
George L. Tucker, St. Louis
Gerardo G. Vergara, Kansas City
Corinne A. F. Walentik, University City
William H. Warren, Springfield
Larry W. Weathers, Manchester
William E. White, Kansas City
Charles K. Whittaker, Kansas City
James W. Willoughby, Kansas City
Arlen Duane D. Winsky, Springfield
James B. Wolfe, Springfield
William H. Woodson, Poplar Bluff
Lewis D. Yecies, St. Louis

March through April 9, 1979

Zaki A. K. Ajans, Mexico
Sara E. Allgood, St. Louis
Raymond A. Amoury, Kansas City
Andres G. Apostol, Monett
William G. Arney, St. Louis
James T. Arnold, Joplin
John T. Ashley, Kansas City
Lillard G. Ashley, Kansas City
John Balhuizen, Kansas City
Paul L. Barone, Nevada
Somasundaram Bharath, Fort Leonard Wood
Frederick M. Brandon, Joplin
Robert V. Brennan, Kirkwood
Shael S. Bronson, St. Louis
Robert D. Brookes, St. Louis
James R. Cobb, Kansas City
George A. Colom, Kansas City
Barry R. Cooper, North Kansas City
Donald E. Cross, Kansas City
Martin L. Crow, Kansas City
Ernst P. Danielsson, Springfield
George S. Devins, Kansas City
Rene J. Du Montier, O'Fallon
Theodore F. Edwards, North Kansas City
Richard H. Fallon, St. Louis
Carl M. Fellhauer, Richmond Heights
James A. Felts, St. Louis
Joseph L. Fisher, St. Joseph
Louis H. Forman, Kansas City
Max S. Franklin, St. Louis
Morris L. Friedman, Kansas City
Donald L. Fuhrman, Kansas City
Lamont W. Gaston, Columbia
August W. Geise, St. Louis
Lawrence E. Giffen, Jefferson City
Robert L. Givler, Kansas City
John R. Goheen, Kansas City
Melvin L. Goldman, St. Louis
Edward P. Gutek, Kansas City
Samual B. Guze, St. Louis
Marijan Herjanic, St. Louis
Charles K. Hofling, St. Louis
Barbel Holtmann, St. Louis
James P. Hopkins, Kansas City
Kun Ken Hu, St. Louis
Warren J. Hunzicker, Kansas City
Yorckay C. Ishizawar, Creve Coeur
Sumer C. Jain, Chesterfield
Charles J. Johnson, St. Louis
Stephen A. Kamenetzky, St. Louis
Murali M. R. Kosuri, Kansas City
James J. Lally, Kansas City
Charles M. Lederer, Warrensburg
Joel M. Leibsohn, Independence
Revis C. Lewis, Kansas City
Carleton J. Lindgren, Kansas City
Arthur B. Lissner, Florrisant
Thomas A. Lovinggood, Cape Girardeau
William C. MacDonald, St. Louis
Aziz O. Mahboubi, Sikeston
Maria E. Manion, St. Louis
John E. Manire, Joplin
Joseph M. Masucci, Kansas City
Charles K. McAllister, Kansas City
Frederick J. McCoy, Kansas City
Abdul R. Mir, Kansas City
Hugh E. Mosbacher, Independence

(Continued)

Physician's Recognition Award Recipients

Richard I. C. Muckerman, St. Louis
Wilbur A. Mullarky, St. Ann
Lawrence W. O'Neal, St. Louis
Voislav F. Ognyanov, St. Louis
Ekkehard Othmer, Kansas City
Harry B. Overesch, Kansas City
Francis X. Paletta, St. Louis
Theodore L. Paletta, St. Louis
Carlos Pappalardo, St. Louis
Agatha L. Park, St. Louis
Bonita J. Peterson, Kansas City
Kenneth A. Powell, Kansas City
Grosvenor G. Roberts, Lee's Summit
Perry T. Roberts, Cape Girardeau
Vernon J. Roden, St. Louis
Abelardo B. Sanchez, St. Louis
Gordon C. Sauer, Kansas City
York E. Silliman, St. Joseph
Charles M. Singleton, Kansas City
David L. Spalding, Springfield
Carl F. Strauss, Kansas City
Marc K. Taormina, Kansas City
Barnard C. Trowbridge, Kansas City
Pearl C. L. Ulett, St. Louis
James T. Van Biber, Independence
Sharon E. Waggoner, St. Joseph
Harry E. Webb, Kansas City
William B. Webber, St. Louis
Arlen D. Winsky, Springfield
Morris F. Wise, Kansas City
George H. Zografakis, St. Louis

April 13, through June 28, 1979

Kenneth E. Cox, Kansas City
Richard J. Dames, St. Louis
Theodore C. De Feo, Kansas City
Mario Decanini, St. Joseph
Francisco Del Muro, Kansas City
Adelia L. M. Doerhoff, Jefferson City
Darrel D. Domann, Springfield
Virgilio P. Dumadag, St. Louis
Joseph W. Eades, St. Louis
Barry S. Farber, Springfield
Pilar J. Franco, Kansas City
Walter J. Gaska, Springfield
Michael A. Gentry, Springfield
Melvin L. Glazer, Kansas City
Wayne O. Gorla, St. Louis
B. S. Naghabhushana Gupta, Kansas City
Patrick B. Harr, Maryville
Daikichi Hata, Boonville
Falls B. Hershey, St. Louis
Robert H. Hodge, Kansas City
William J. Huse, Kansas City
Johnny E. Johnson, St. Louis
Samuel Kantor, Kansas City
Louis Keller, Clayton
Alice D. Kitchen, St. Louis
Felix F. Larocca, St. Louis
Philip J. Le Fevre, Springfield
Duk Sung Lee, Chesterfield
Charles H. Leslie, Des Peres
Gary F. Lockwood, Kansas City
George E. Magaletta, Cape Girardeau
Robert G. McAfee, Kansas City
Howard J. McAlhany, Springfield
Mary K. McCaffree, Jefferson City
David C. Mechlin, Columbia
Jerry L. Meyer, Concordia
William C. Mixson, Kansas City
Thomas M. Moran, St. Louis
James F. O'Malley, Kansas City
Donald L. Oetter, St. Louis
Richard A. Osbourn, Fulton
Orhan M. Ozmat, St. Louis
Agatha L. Park, St. Louis
Meredith C. J. Payne, St. Louis
Carl G. Popp, Sikeston
David J. Ray, Joplin
M. Wayne Reynolds, Warrensburg
William E. Rinck, Independence
Shanmuga S. Sabapathy, Joplin
Luis H. Schwarz, St. Louis
Modaser Shah, St. Louis
Hang Chang Shen, St. Louis
William F. Sill, St. Charles
Otto M. Spurny, Kansas City
Alexander J. Steiner, Clayton
Byron M. Stuart, Boonville
Emel A. Sumer, St. Louis
Ted C. Vargas, Pacific
Somboon Vidheecharden, Chesterfield
Thomas H. Waddell, Kansas City
David L. Wilkinson, St. Louis
Muhammad S. Zia, Kansas City

July 23 through August 17, 1979

Edward J. Ackley, Kansas City
Chaudhary M. Asghar, Kansas City
Donald H. Beisner, Springfield
George M. Bohigian, St. Louis
Juan O. Cardenas, Florissant
George T. Carpenter, St. Joseph
Thomas W. Carroll, Lamar
John A. Chan-A-Sue, St. Louis
Dhanukodi Chellappa, Joplin
William F. Clary, Springfield
Rama G. Eachempati, Chesterfield
James E. Edwards, St. Louis
Robert M. Feibel, St. Louis
Victor H. Ferreira, St. Louis
Elizabeth M. W. Heimburger, Columbia
Shi Hui Huang, St. Louis
Margaret J. Hustad, Kansas City
Walter N. A. Latimer, Kansas City
Charles R. Lepley, St. Louis
Charles H. Lewellen, Louisiana
Roberto Lopez-Plata, Kansas City
Gil B. Manalo, Carthage
Kenneth D. Michael, St. Louis
Raj N. Mohapatra, St. Louis
Alan E. Oestreich, Columbia
Prabha Partap, St. Louis
Javier A. Pichardo, Farmington
William B. Pingelton, Columbia
William H. Quayle, Columbia
Rudraiah Raja-Sekhar, St. Louis
Shankararao Rao, Chesterfield
Barbara E. Russell, Rolla
A. Lester Saferstein, Kansas City
James T. Shaw, Hermann
Joseph S. Shuman, Bridgeton
Luzviminda F. Sicat, Warrensburg
George H. Sobky, Manchester
Charles B. Wheeler, Kansas City
Charles B. Wilkinson, Kansas City
Calvin C. Young, Joplin

The St. Louis Academy of Family Physicians

presents the

2nd Annual International Medical Forum

in

MAZATLAN, MEXICO

January 11 - 18, 1980

8 days and 7 nights at the deluxe Camino Real

$715.00 per person based on double occupancy

+ **$50.00** registration fee

Your tour includes:

- Roundtrip air transportation Saint Louis/Mazatlan
- 7 nights accommodations at the Camino Real
- Roundtrip transfers airport/hotel
- Baggage handling, taxes, and gratuities
- 7 breakfasts and 3 dinners
- Special cocktail party with hot and cold hors d'oeuvres
- Complimentary tennis
- Personal tour escort from Brentwood Travel Chesterfield Village, Ltd.

CME credit applied for
The seminar will include six guest speakers on medical subjects
Those attending will receive a tax certificate for the IRS

Plan Now for Your Winter Week in the Sun!
Friends Are Welcome!

RESERVATION FORM
St. Louis Academy of Family Physicians
3839 Lindell Boulevard, St. Louis, Missouri 63108

ame ______________________________ Phone ______________________

ddress ____________________________ City, State, Zip ______________

nclosed full payment of $715.00 per person for ______ persons made payable to
Brentwood Travel Chesterfield Village, Ltd., which must be received by Nov. 1, 1979.
egistration fee of $50.00 made payable to the St. Louis Academy of Family Physicians
r additional information please call Madlynn Levin at [314] 532-5515.

Brentwood Travel Chesterfield Village, Ltd.
300 Chesterfield Center, Chesterfield, Missouri 63017

Generics save money. Big money!

The FTC estimates that $400 million could be saved annually on the nation's Rx bill if physicians prescribed generics. Are you saving *your* patients extra dollars?

Purepac, America's leading manufacturer of a national brand of generics, would like to show you the tremendous savings possible with just three of our 700 generic products:

DRUG		AVERAGE RX PRICE (100's)	$ SAVINGS WITH PUREPAC	% SAVINGS WITH PUREPAC
Pavabid Capsules*	150 mg.	$10.32		
Purepac Papaverine	150 mg.	3.95	**$6.37**	61.7%
Equanil Tablets*	400 mg.	8.15		
Purepac Meprobamate	400 mg.	1.85	**6.30**	77.3%
Librium Capsules*	10 mg.	8.76		
Purepac Chlordiazepoxide HCl.	10 mg.	3.90	**4.86**	55.4%

*Registered trademarks of Marion Labs., Wyeth Labs., Roche Labs., respectively.

Purepac generics save money. Big money. Purepac is dedicated to providing your patients with quality products that are equivalent to their brand name counterparts at significant savings.

But we can't do it alone. We need your cooperation.

Send for Purepac's *free* Brand Name/Generic Name Reference Chart today. You'll receive an alphabetical listing of brand name drugs with their generic counterparts.

And next time you write a prescription, write for Purepac brand generics. Your patients will know you care.

PUREPAC. Competitive prices and peace of mind.

FREE!

Please send me my FREE copy of Purepac's Brand Name/Generic Name Chart.

Name____________________

Address____________________

City__________State______Zip____

Mail to Purepac Pharmaceutical Co.,
200 Elmora Avenue, Elizabeth, N.J. 07207

MS 1079

PUREPAC
Elizabeth, NJ 07207

THE LEADING NATIONAL BRAND OF GENERICS

LETTERS to the Editor

Dear Dr. Wooldridge:

According to an AP News Release concerning the recent Midwestern Governors Conference at Osage Beach, Missouri, matters of rural health care were discussed. A presentor, Dr. E. Grey Dimond, former provost of health sciences at the University of Missouri-Kansas City, is quoted as saying, "We should raise tuition in our medical and dental schools until it hurts." . . . "Then, the students should be offered a loan fund under which they would agree to serve in rural areas." . . . "Let the marketplace decide it. Put out more doctors and you'll have enough in the rural areas." I submit that these statements, as reported by the press, are erroneous and potentially damaging to the development of improved rural health care.

The solution suggested by Dr. Dimond carries popular appeal in that it suggests that guilt for past deficiencies and the responsibility for future solutions rests almost entirely on the shoulders of organized medicine and medical education. However, such simplistic popular assumptions and resulting programs have repeatedly been demonstrated to fail to reach their objectives by numerous national and state health manpower surveys and studies, including the most recent "Recommendations from the Governor's Task Force on Rural Health" submitted to Governor Joseph P. Teasdale on Jan. 23, 1979.

I shall not go into the details of this report compiled by "this diversified group of health care providers, academicians and consumers charged with the responsibility of identifying rural health care problems throughout the state," since their findings and recommendations are a matter of public record. ("Further, viable recommendations for action to overcome these problems were to be developed.") This report, as has numerous previous ones, grapples with the complex and difficult socioeconomic and cultural realities of the problem, which must be dealt with in an organized, comprehensive and cooperative fashion by health providers ("Doctors," nurses, hospitals, educational institutions, public agencies and others), rural communities and state and national government in order to have any probability of implementing an appropriate and near adequate rural health care delivery system.

Tolstoy's "War and Peace," written in the mid 19th Century, and Mauldin's *G. I. Joe*, caricatured in the Second World War, are modern classics in that they opened the realities of war to popular display through experiences of the *real* human victors and victims of war, the soldiers and civilians ensnarled in the battlefield. Without the vivid impact of these classic perspectives, the popular image of war tended to be formed by the detached intellectual attitudes of Romantics and Power Seekers.

I would like to suggest that a view within the same front line battlefield perspective is equally appropriate for politicians, health planners and health educators to reach a realistic understanding of rural health care. This would save them from being deluded by the detached intellectual attitudes of romantics and power seekers.

Sincerely,
Robert W. Edmonds, M.D., FAAP
Sedalia

"There is no nation on earth so dangerous as a nation fully armed and bankrupt at home."

— **H. C. Lodge**
Speech before the National Security League,
Washington, D. C., Jan. 22, 1916

MUNNS
MEDICAL
SUPPLY

9202 Barton Overland Park, Ks. 66214 913-492-5820

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 367-9673
Contact: **Loretta Giacoletto**

Nov. 9-11	Sixth Annual Symposium: Anesthesia and the Geriatric Patient (Marriott Hotel)
Nov. 10	Diabetes Seminar
Nov. 29-30	Update in Selected Topics in Medicine (St. Luke's Hospital)
Dec. 6-8	Allergy for the Practicing Physician
(1980)	
Jan. 26	WUMC Alumni Winter Meeting (Ixtapa, Mexico)
Jan 27-Feb. 1	Ob-GYN Conference (Keystone, Colo.)
Feb. 28-29	MKSAP V
March-May	Internal Medicine Board Review (Jewish Hospital of St. Louis)
Mar. 20-21	Rheumatology Conference
Mar. 27-28	Vascular Neurosurgery
Apr. 17-18	Seventh Annual OB-GYN Symposium
Apr. 25-26	Eye Alumni Meeting
May 3-11	Second Annual Current Concepts in Musculoskeletal Radiology and Orthopedics Meeting
May 9-10	Orthopedic Radiology
May 15-16	Neuromuscular Diseases

Kansas City Society of Ophthalmology and Otolaryngology
30306 Gillham Rd., Kansas City 64108
(816) 531-8432
Contact: **Ron Cosens, Executive Director**

Dec. 6-7	Annual Clinical Meeting (Hilton Plaza Inn)

Ed Bixby Institute for Postgraduate Education
Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4167

Dec. 5	Current Management of Diabetes Mellitus
(1980)	
Feb. 6	Carcinoma of the Breast: Update 1980
Apr. 2	Present Status of Antibiotic Therapy
June 4	Chronic Obstructive Pulmonary Disease
Aug. 6	Rheumatic Heart Disease

University of Missouri School of Medicine Office of Continuing Education
M-233 Medical Center, Columbia 65212
(314) 882-2256
Contact: **William D. Bradshaw, M.D.**

Oct. 26-27	Advances in Rheumatology
Nov. 16-17	M.D. Day
Nov. 29-Dec. 1	Group Relations in Health Care: A Working Conference on Authority, Responsibility and Organizations in Health Care Delivery Systems (TWA Breech Training Academy, Kansas City)
Nov. 30-Dec. 1	Advances in Trauma (Crown Center Hotel, Kansas City)
(1980)	
Feb. 17-21	Cancer Management of the Clinician of the Eighties (Tamarron, Durango, Colo.)
Feb. 28-29	Nutritional Update
Mar. 4	Preceptor's Day
Mar. 5-6	Family Practice Update
Mar. 12-13	Medicine and Religion
Mar. 20-21	Spring Surgery Conference
Mar. 31-Apr. 1	26th Annual Urology Seminar (Crown Center, Kansas City)
Apr. 9-10	Primary Pediatrics for the Primary Physician
Apr. 18-20	Group Relations
May 9-11	Third Annual Missouri Cardiovascular Conference (Tan-Tar-A, Osage Beach)
June 2-3	Sixth International Symposium on Intestinal Microecology
Aug. 10-11	Third Annual Workshop in Soft Tissue Surgery

Baptist Memorial Hospital
Medical Staff Office
6601 Rockhill Rd., Kansas City 64131
(816) 942-7200
Contact: **Forrest H. Kendall, Jr., M.D.**

Oct. 24	Early Identification and Management of Ear Problems in Children (Curry Education Center)

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine

510 S. Kingshighway, St. Louis 63110
(314) 454-2291
***Contact:* Ronald G. Evens, M.D., Director**

City-Wide Radiology Conference

Nov. 12	Skeletal Lesion With a Fibrous Matrex
Dec. 10	Hepatobiliary Imaging With ^{99m}Tc-HIDA
(1980)	
Jan. 14	Conference at St. Louis University
Feb. 11	Pediatric Radiology
Mar. 10	CT of the Thorax-Updated
May 12	Parenchymal Liver Disease — Evaluation With Computed Tomography

DePaul Community Health Center

12303 DePaul Dr., Bridgeton 63044
(314) 344-6262
***Contact:* Medical Director's Office**

Nov. 7	Hematology-Oncology Update (DePaul Division Auditorium)

Menorah Medical Center

4949 Rockhill Rd., Kansas City 64110
(816) 276-8000

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds

***Contact:* Erich W. Pollak, M.D., Director of Surgical Education**

First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds
Every Tues.	9:00 AM Medicine Staff Conference (Except second Tuesday of each month)

***Contact:* David S. Sneid, M.D., Director of Medical Education**

Greater Kansas City Radiological Society

***Contact:* Raymond W. Hartwig, M.D., Dept. of Radiology, Trinity Lutheran Hospital, Kansas City**

Nov. 14	Chest Roentgenology (Annual Banquet, Alameda Plaza Hotel) 4 PM Lecture (St. Luke's Hospital)
(1980)	
an. 16	Pediatric Radiology (Dinner Meeting, Granada Royale Hometel) 4 PM Lecture (Children's Mercy Hospital)

Greater Kansas City Radiological Society

Feb. 13	Nuclear Medicine (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (University of Kansas Medical Center)
Mar. 12	Abdominal C. T. (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (St. Luke's Hospital)
Apr. 23	Bone Roentgenology (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (University of Kansas Medical Center)

University of Kansas College of Health Sciences

Division of Continuing Education
Rainbow at Olathe Blvd., Kansas City, Kan. 66103
(913) 588-7130

Oct. 23-24	Medicine and Religion
Nov. 29-Dec. 1	Controversial Problems in Surgery

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society

Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

Nov. 1-3	Annual Fall Clinical Conference — Kansas City Southwest Clinical Society (Alameda Plaza Hotel)
Nov. 15-16	MKSAP V (Alameda Plaza Hotel)
Dec. 6-8	The Heart — 1979 (Alameda Plaza Hotel)
(1980)	
Jan. 20-25	Mid-Winter Traveling Medical Education Course. Kansas City Southwest Clinical Society (Steamboat Springs, Colo.)
Feb. 2-9	Medical Seminar at Sea. Kansas City Southwest Clinical Society (Caribbean Cruise leaving Miami)
Feb. 8-9	The Long Weekend: Update in Electrocardiography, Radiology and Use of the Laboratory (Crown Center Hotel)
Feb. 23-Mar. 1	Late-Winter Traveling Medical Education Course. Kansas City Southwest Clinical Society (Maui, Hawaii)
Mar. 27-29	Perspectives in Medicine (Crown Center Hotel)
Apr. 10-12	Update in Obstetrics and Gynecology (Crown Center Hotel)
May 2-3	The Long Weekend: Office Clinical Care (UMKC School of Medicine)
May 15-16	Surgical Problems, Old and New (Alameda Plaza Hotel)
June 5-6	Symposium on Physical Fitness (Crown Center Hotel)

NOW AVAILABLE
UNDER THE MISSOURI
MEDICAL AID
VENDOR
PROGRAM

324 mg
Quinaglute®
DURA-TABS®
(quinidine gluconate)

Cooper Laboratories, Inc.
Wayne, New Jersey 07470
Cooper

109 103

Quinamm™

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS: For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

CONTRAINDICATIONS: Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency. Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

PRECAUTIONS: Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication.
Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

ADVERSE REACTIONS: Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

DOSAGE AND ADMINISTRATION:
1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

U.S. Patent 2,985 558

Merrell

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to:
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

8 3305 (Y371A)

for Knotts in the night

Quinamm™

each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

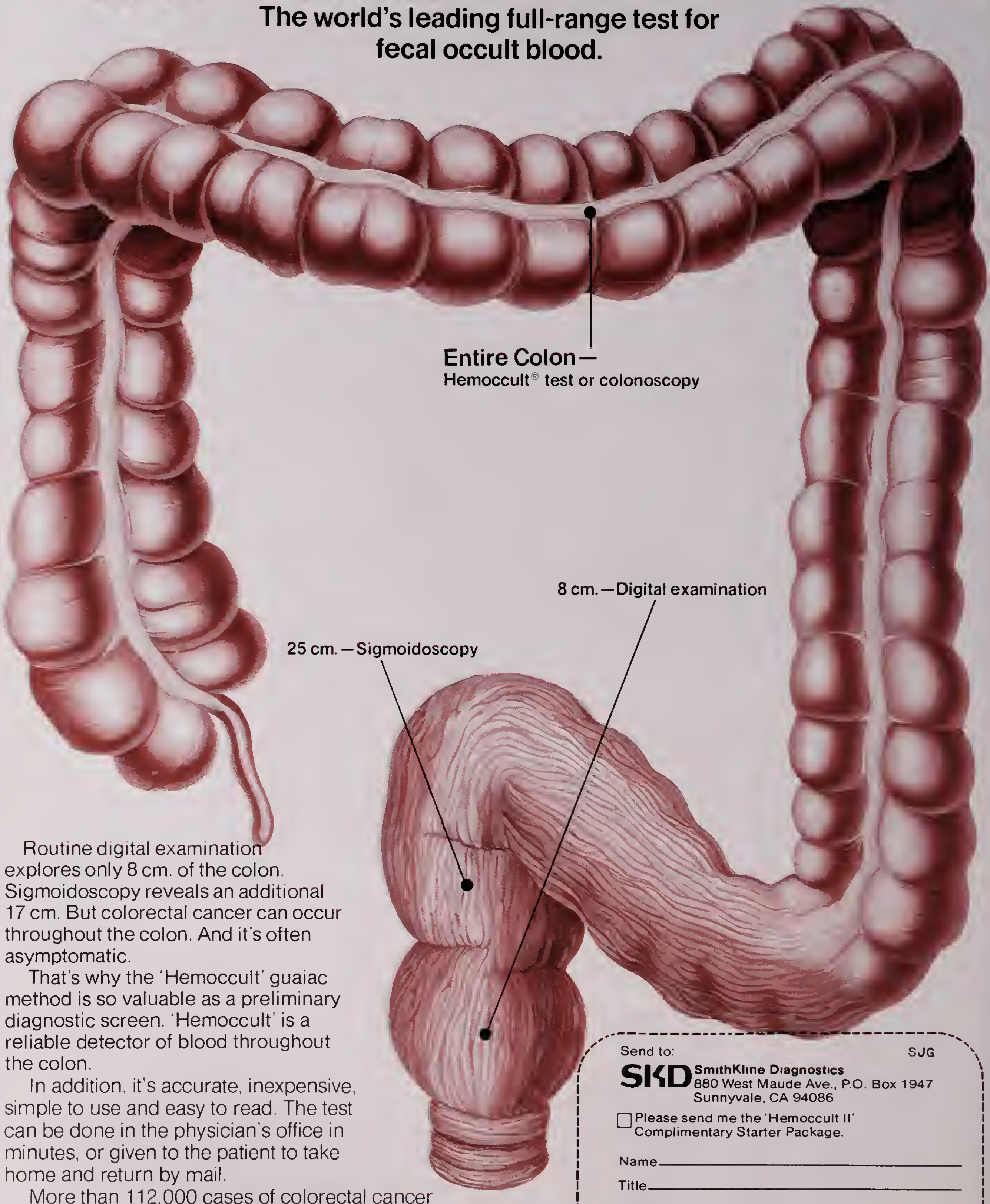
specific therapy for painful night leg cramps

Nocturnal recumbency leg muscle cramping is frequently an unwelcome bedfellow for many patients—especially those with arthritis, diabetes or peripheral vascular disease . . . consider Quinamm . . . simple, convenient dosage—usually just one tablet at bedtime . . . can provide restful, welcome sleep without night leg cramps.

See opposite page for prescribing information.

Hemoccult®

The world's leading full-range test for fecal occult blood.



Routine digital examination explores only 8 cm. of the colon. Sigmoidoscopy reveals an additional 17 cm. But colorectal cancer can occur throughout the colon. And it's often asymptomatic.

That's why the 'Hemoccult' guaiac method is so valuable as a preliminary diagnostic screen. 'Hemoccult' is a reliable detector of blood throughout the colon.

In addition, it's accurate, inexpensive, simple to use and easy to read. The test can be done in the physician's office in minutes, or given to the patient to take home and return by mail.

More than 112,000 cases of colorectal cancer will occur in the United States this year. The earlier they are diagnosed, the greater the chances for successful treatment.

'Hemoccult' is available through local distributors, nationwide.

Send to: SJG

SKD SmithKline Diagnostics
880 West Maude Ave., P.O. Box 1947
Sunnyvale, CA 94086

☐ Please send me the 'Hemoccult II' Complimentary Starter Package.

Name____________________

Title____________________

Institution____________________

Address____________________

City__________ State________ Zip______

Phone____________________

QUART
LIQUID
3 CUPS
1 CUP
Loma Linda
soyalac
POWDERED
NET WT 16 OZ. (1 LB.) 454 g

A simple solution for beating the high cost of feeding babies.

Powdered Soyalac mixed with water (according to ections on the label) is an inexpensive, soy-based ant formula your patients can buy.

Up to 50% less expensive than ready-to-serve mulas.

Up to 25% less expensive than liquid concentrates. luding our own!

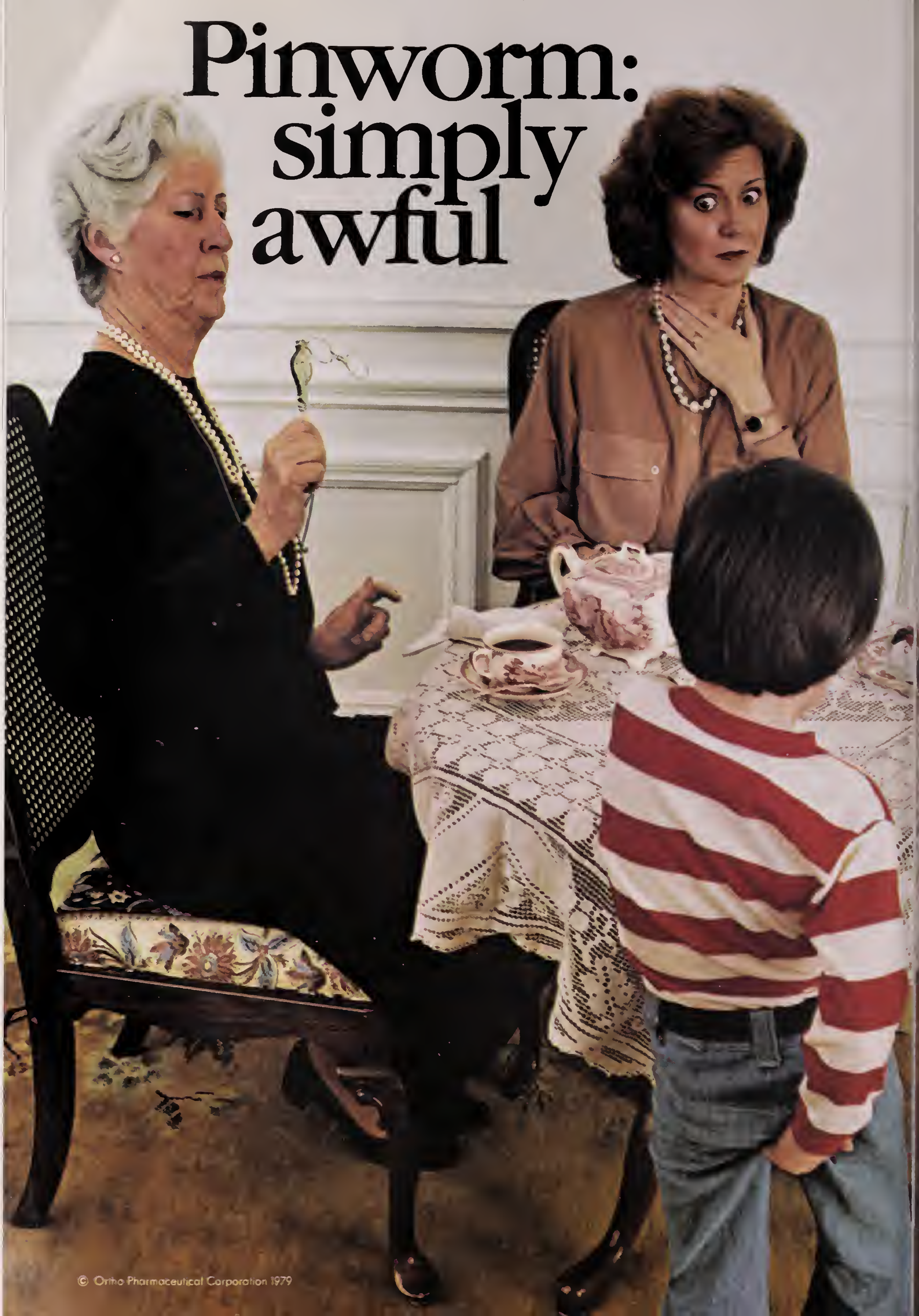
Soyalac is the only leading milk-free infant forla available as an inexpensive powder. It provides ctly the same nutritional balance as Soyalac's concentrated and ready-to-serve infant soy formulas – a a fraction of the cost.

Your patients who use formula will appreciat knowing about it.

For detailed information and samples, please ca or write the Soyalac sales representative in your area

Loma Linda Foods 11503 Pierce Street
Riverside, CA 92515 (714) 785-2475
Loma Linda Foods 13246 Wooster Road
Mount Vernon, OH 43050 (614) 397-7077

Loma Linda


Pinworm:
simply
awful

© Ortho Pharmaceutical Corporation 1979

Vermox: awfully simple

No dosage calculation

one dose single VERMOX 100 mg tablet is the treatment for pinworm in both adults and children* of all body weights; no dosage calculations or confusion

one time the VERMOX tablet may be taken any time that is convenient, so that normal routines won't be interrupted; convenient schedule encourages compliance

one tablet chewable, orange-flavored VERMOX tablet may also be crushed and mixed or simply swallowed; no messy liquid to spill and no dye to stain

95% cure mean cure rate in clinical studies was 95% (range: 90%-100%) after treatment with one VERMOX tablet; in cases of reinfection, a second tablet is advised

* Because Vermox has not been extensively studied in children under two years of age, the relative benefit/risk should be considered before treating these children. Vermox is contraindicated in pregnancy (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

Vermox chewable tablets
TRADEMARK
(mebendazole)

scription VERMOX (mebendazole) is methyl enzoylbenzimidazole-2-carbamate.
ions VERMOX exerts its anthelmintic effect by cking glucose uptake by the susceptible helminths, reby depleting the energy level until it becomes dequate for survival.

nan, approximately 2% of administered mebenole is excreted in urine as unchanged drug or a nary metabolite. Following administration of 100 mg nebendazole twice daily for three consecutive days, sma levels of mebendazole and its primary abolite, the 2-amine, never exceeded 0.03 μg/ml 0.09 μg/ml, respectively.
lications VERMOX is indicated for the treatment of *huris trichiura* (whipworm), *Enterobius vermicularis* nworm), *Ascaris lumbricoides* (roundworm), *Ancylosa duodenale* (common hookworm), *Necator ameriius* (American hookworm) in single or mixed infections. cacy varies in function of such factors as pre-existing diarrhea and gastrointestinal transit time, degree of infection and helminth strains.
Contraindications VERMOX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.
Precautions *PREGNANCY:* VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.
PEDIATRIC USE: The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.
Adverse reactions Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.
Dosage and administration The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food.

For the control of pinworm (enterobiasis), a single tablet is administered orally, one time.

For the control of roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days.

If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

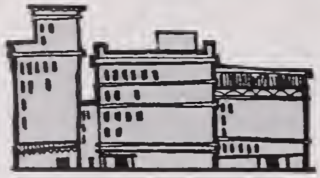
How supplied VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.

VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium, and co-developed by Ortho Pharmaceutical Corporation.

THO PHARMACEUTICAL CORPORATION
itan, New Jersey 08869

OJ-1511

ORTHO



NEWS

From the Medical Schools

ST. LOUIS UNIVERSITY

A new program designed to meet the psychiatric needs of the elderly in the St. Louis area has been initiated by the Department of Psychiatry. The "gero-psychiatry" program is the first of its kind in the St. Louis metropolitan area.

Dr. Grossberg

"In St. Louis, there is no special program geared toward the psychiatric needs of the elderly," said *George Grossberg*, M.D., psychiatrist and director of the new program. "This new service will offer evaluation of the elderly with emotional problems, whether they be depression or organic brain syndrome."

Dr. Grossberg says current thinking is that up to 33% of the elderly who have a loss of memory can be helped. In 15%, the condition can be completely reversible. He adds that some persons with emotional problems are depressed and that depression is a treatable entity.

In the new medical center program, the elderly person could be evaluated by a team made up of Dr. Grossberg, a clinical psychologist and a psychiatric social worker. Most of the cases will be the product of referrals from private doctors or medical directors of nursing homes.

An American Cancer Society institutional grant for $25,000 will enable researchers at the Medical Center to investigate new projects in cancer research that will include studies on the results of chemotherapy on human breast cancer, how certain cells function in children with leukemia and hormone receptors in human renal cancer.

The breast cancer project will be a study of human beings who already have the cancer and will include laboratory research. Another project will be a study of how carcinogens affect rats.

The individual proposals for shares of the total grant are reviewed by *Wendell Davis*, Ph.D. The grant is administered by *Eli Nadel*, M.D., assistant vice-president for medical center research.

Armand E. Brodeur, M.D., professor o radiology and associate professor of pediatrics, was appointed a consulting editor for *Issues in Radiology*, a new publication from William Douglas McAdams, Inc. of New York. The publication will be printed monthly for the remainder of 1979 and bimonthly beginning in January of 1980. Dr. Brodeur is also director of radiology at Cardinal Glennon Memorial Hospital for children.

Dr. Brodeur

Felix E. F. Larocca, M.D., assistant clinical professor of psychiatry, recently chaired a workshop on depression sponsored by the Mid-Continent Psychiatry Society at the Lake of the Ozarks during the society's annual meeting.

WASHINGTON UNIVERSITY

Paul E. Lacy, M.D., Ph.D., Edward Mallinckrodt Professor and chairman of the Department of Pathology, has been selected by the Medical Society of the State of New York as the recipient of the 1979 Albion O. Bernstein Award.

The award is presented for outstanding research in areas contributing to the advancement of medicine. The award presentation was on September 16 in New York City at the 173rd Annual Convention of the Medical Society of the State of New York. Selection was based on Dr. Lacy's successful transplantation of islet cells in diabetic rats.

Dr. Lacy received his B.A., M.Sc. and M.D. degrees at Ohio State University and his Ph.D. degree at the University of Minnesota. He joined the Washington University faculty in 1956 and has been head of the Department of Pathology since 1961.

Philip W. Majerus, M.D., researcher, has announced the results of research which indicate a significant prevention of thrombosis in hemodialysis patients through use of low-dose aspirin. His research appeared in the Sept. 13, 1979 issue of the *New England Journal of Medicine*.

A professor of medicine and biological chemistry and director of the Division of Hematology, Dr. Majerus also implied that use of aspirin in low doses significantly reduces the chance of a second thrombosis in people with other thrombotic disorders.

Dr. Majerus attended Notre Dame University and received his M.D. degree from Washington University in 1961. He served his internship and residency at the Massachusetts General Hospital in Boston. He has been on the Washington University faculty since 1966 and is a member of several medical societies, including Alpha Omega Alpha, the medical honor society. He is currently the editor of the *Journal of Clinical Investigation*.

Other School of Medicine researchers involved in this study are *Herschel R. Harter*, M.D., assistant professor of medicine and director of the Chromalloy Kidney Center; *James A. Delmez*, M.D., assistant professor of medicine; *Charles B. Anderson*, M.D., professor of surgery; *Nancy Stanford Davis*, research associate; and *Carol Weerts*, coordinator of the dialysis unit. *John W. Burch*, M.D., also participated in the study and is now at the University of Pennsylvania.

The Urological Research Foundation, a private philanthropic organization formed last year, presented a tissue culture incubator to the Division of Urology at the School of Medicine on September 24 at Wohl Hospital.

The Foundation was organized to provide support to the research program in the Division of Urology. This tissue culture incubator is the first piece of equipment purchased by the Foundation o aid in this research. The funds have been raised entirely by private subscription, amounting to collections of more than $25,000 to date and repesenting approximately 50 individuals. These are ll persons wishing to make a statement of their personal support of medical research. The goal of he organization is to raise funds to provide an nnual income of at least $50,000 to support the ervices of technicians, equipment and supplies or ongoing research.

William R. Fair, M.D., director of the Division f Urology, cites this contribution as an example f what committed individuals can do in making ubstantial contributions to the needs of medical esearchers.

UNIVERSITY OF MISSOURI-KANSAS CITY

For the second year, Marion Laboratories in Kansas City has donated $30,000 to the University of Missouri-Kansas City Student Loan Fund. *Ewing Kaufman*, president of Marion Laboratories, presented the check in a brief ceremony attended by students and faculty who expressed their appreciation for the contribution. Mr. Kaufman, also owner of the Kansas City Royals baseball team, provided 200 free baseball tickets for students this year and hosted a dinner for the graduates in his private suite at the ballpark.

Dr. Stanley Joel Reiser, history of medicine program director at Harvard Medical School, presented a Visiting Docent Lecture entitled "The Doctor/Machine Relationship" on October 19. A physician and historian, Dr. Reiser's most recent book is *Medicine and the Reign of Technology*, published by Cambridge University Press.

John B. West, M.D., Ph.D., a noted authority in the field of respiratory physiology and medicine, was a visiting docent on October 2-4. Dr. West is currently professor of medicine and bioengineering at the University of California in San Diego. He is well known for his book on the physiology of respiration and the companion volume on the pathophysiology of respiratory diseases.

Dr. Charles Wilkinson, assistant dean for curriculum, was one of 60 guests at the White House for a briefing on the President's Mental Health Systems Act. Dr. Wilkinson had earlier chaired an ad hoc review committee for a special series of grants sponsored by the National Institute of Mental Health.

On September 11, *Dr. Michael E. DeBakey*, president of Baylor University and world-famous surgeon, was the guest of Truman Medical Center and the University of Missouri-Kansas City. His visit was sponsored by the Ralph R. Coffey Educational Fund. Dr. DeBakey made rounds with the general surgical residents and presented a lecture at the Medical School on "Patterns of Atherosclerosis."

The Ralph Coffey educational fund was created in honor of Dr. Ralph Coffey, former chief of surgery at the Kansas City General Hospital from 1950 to 1964. The fund has been supported by donations from Dr. Coffey's former residents. Previous lecturers in this series have been *Dr. Dwight Harkin*, *Dr. Charles Lucas*, *Dr. Frank Mantz* and *Dr. Glenn Geelhoed*.

Dean Harry S. Jonas announced the appointment of *Dr. A. C. Favors* as docent and assistant professor of medicine as of September 1. Dr. Favors received his B.S. degree in pharmacy from Texas Southern University in 1967 and his M.D. degree from the University of Washington in Seattle. After completing his residency at Grady Memorial Hospital in Atlanta, Ga., he took a year's training in ambulatory medicine and a one-year fellowship in hematology-oncology at the University of Colorado in Denver. A second year of fellowship in oncology followed at the M. D. Anderson Tumor Institute and Hospital in Houston Tex.

UNIVERSITY OF MISSOURI-COLUMBIA

Two University Medical Center teachers-administrators have been selected for membership on national committees that pertain to the quality of medical research and health sciences programs.

Dr. James L. Gaylor, chairman of the Department of Biochemistry, has been named chairman of the Physiological Chemistry Study Section of the National Institutes of Health. This section reviews applications for research grants relating to studies of chemical reactions which take place in biological systems. Currently, the 20 members are evaluating research proposals that relate closely to enzyme mechanisms, protein structure, membranes, plus structure and functions of nucleic acids.

Dr. Richard Oliver, director of the medical technology program for the School of Health Related Professions, has been appointed to the National Accrediting Agency for Clinical Laboratory Sciences for a four-year period, 1979-1983. The 12-member review committee includes medical technologists, pathologists and educators who participate in site surveys and critique self-evaluation reports of laboratory science programs, review accreditation recommendations, provide consultation services and maintain knowledge of current trends in education, accreditation and needs of the constituency served by the committee.

Two factors distinguish this year's entering medical school class from previous classes. There are 28 women, more than ever before. It is a mature class age-wise. The average age is nearly 24½ years. The oldest of the 110 new medical students is 40. Twenty are 25 years or older and the youngest class members are 21.

About half of the students are from the metropolitan areas of St. Louis and Kansas City and half are from Missouri's "rural" areas, according to *Kimberly McDaniel*, registrar for the Medical School. The admissions policy is to attempt to reflect the demography of the state, according to *Dr. Jerry Royer*, associate dean for student affairs.

Applications to the medical school in Columbia this year held almost constant with the number of applications received last year, although a decreasing national trend has been noted the past four years.

Thirty-four of this year's new students hold undergraduate or graduate degrees from the University of Missouri-Columbia; 44 attended other Missouri colleges and universities. The largest number is from Washington University of St. Louis. With few exceptions, the students majored in biology or chemistry.

Joseph W. Mayo, M.D., assistant professor of child health, joined the faculty after completing his residency training here. After graduation from the University of Massachusetts in 1963, he pursued graduate studies in biochemistry and earned his Ph.D. degree at Michigan State University in 1968. For four years, he did post-doctoral work and was on the faculty at Case Western Reserve in Cleveland. He then entered the medical school there, graduating in 1976. His research interest is in cystic fibrosis.

In Memoriam

Marvin H. Gibstine, M.D., 12255 DePaul Dr., Bridgeton 63044; a graduate of Washington University, 1946; member of St. Louis Metropolitan Medical Society; age 56; died Aug. 15, 1979.

Levi H. Fuson, M.D., 502 S. 6th, Savannah 64485; a graduate of Washington University, 1915; member of Buchanan County Medical Society; age 90; died Aug. 22, 1979.

Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
Since 1899
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Bargmann and Philip E. Mappert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
Suite 202-A, 6600 W. 95th Street, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

VISION TESTER
BY Titmus

This professional model tests vision for:

preschool & illiterate children
primary grade children
older children & adults
FAA examinations

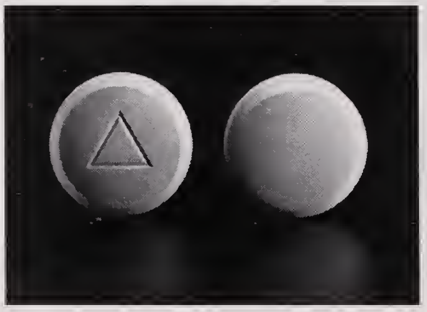
to arrange a demonstration in your office contact your local Goetze-Niemer salesman or call

The GOETZE-NIEMER Co.

1701 Brooklyn, K.C., MO. 816-231-1900
serving the Midwest since 1884

The Make

Examining a Few Myths About Prescribing.



Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand–name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.

MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were not bioequivalent to a reference product. As
know, there is substan
literature on this subj
affecting many drugs,
cluding such antibioti
as tetracycline and ery
thromycin. The recor
drug recalls and court
actions affirms strong
that there are differen
among pharmaceutic
companies and their products. Research-intensive companies have far better record
than those that do no
search and may pract
minimum quality ass
ance.

MYTH: Industry favors only "expensive" brand names and denigrates a
generics.

FACT: PMA companie
make 90 to 95 percent
the drug supply, inclu
ing, therefore, most o
generics. Drug nomen
clature is not the imp
tant point; it's the com
tence of the manufacturer and the integrity
the product that coun

Matters.

*H: Generic options al-
t always exist.*

**T: About 55 percent
rescription drug ex-
diture is for single-
rce drugs. This
ns, of course, that for
45 percent of such
enditure, is a generic
cribing option avail-
.**

---

*H: Generic
criptions are filled with
pensive generics, thus
g consumers large
s of money.*

**T: Market data show
you invariably
cribe—and pharma-
dispense—both
d and generically
led products from
vn and trusted
ces, in the best inter-
f patients. In most
s the patient receives
oven brand product.
ngs from voluntary
andated generic
cribing are grossly
gerated.**

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.

PMA

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

Announcing the Opening
for the Position of

Executive Director

The Metropolitan Ambulance Services Trust (MAST), a public trust of Kansas City, Missouri, is seeking qualified applicants for the position of Executive Director.

MAST is a newly created organization entrusted with the responsibility of assuring the availability of an advanced life support pre-hospital care system for the citizens of Kansas City, Missouri. As such, MAST's Board of Trustees is interested in attracting a highly competent and knowledgeable administrator to assume the position of Executive Director.

The job of Executive Director will require ability and knowledge in staff management; contracts and contract negotiations; health care industry processes for utilization review, capital rationing and medical audit; public and private budgeting and finance; rate-setting; public relations; private, public and third party billings and reimbursement mechanisms; Board management; equipment and supply procurement; and related executive responsibilities.

MAST is interested in reviewing qualifications of interested applicants. If interested in this highly challenging position, please send a copy of your current curriculum vitae, with references, and information you feel is qualifying data to the following address:

Metropolitan Ambulance Services Trust
c/o Department of Health
10th Floor, City Hall
Kansas City, Missouri 64106

Applicant should have a M.H.A. degree or equivalent, minimum of 5 years experience in an administrative position in health related organization. Salary for the position is negotiable, based on qualified, proven experience.

Component Society News

BUCHANAN COUNTY MEDICAL SOCIETY

Fifty-one physicians attended the annual election meeting and a dinner and program of the Buchanan County Medical Society on September 5 at the Swiss Chalet in St. Joseph.

Newly elected officers are Drs. Gary A. Dyer, president-elect; Robert R. Stuber, vice-president; Eugene G. Wolanski, secretary; Mande D. Monte, treasurer; and William H. Ames, Board of Censors.

MSMA delegates chosen are Dr. Berwyn H. Moen and Dr. Joe S. Gunter with alternates Drs. Edward M. Beheler, Robert L. Corder, Jr., Gerald E. Fox, F. James Marston, Charles N. Mullican and F. Gregg Thompson, III.

Dr. Corder also was named to the Committee on Public Policy and Dr. John N. Martin was named to the Board of Trustees. Following a custom of more than 30 years, the retiring president, Dr. Carl K. Ness, was elected to the Executive Secretary Governing Committee.

The newly elected officers and Dr. R. Philip Acuff, 1978 president-elect, will be installed at the Society's annual installation meeting in December.

After the election, Dr. E. J. Cunningham, president of the St. Louis Metropolitan Health Plan and president-elect of the St. Louis Metropolitan Medical Society, and Mr. James Dyer, executive director of the Metro Health Plan and managing director of Medserco, presented a program on "Individual Practice Associations."

Dr. Ness presided at the election meeting and Dr. Martin introduced the program speakers and moderated an enthusiastic question-and-answer session on practice associations.

ROBERT R. STUBER, M.D., *Secretary*

The advertising in
MISSOURI MEDICINE
keeps you informed
and helps pay the
publishing costs!
When the local
representative calls,
tell him you saw
his company's ad in
your journal.

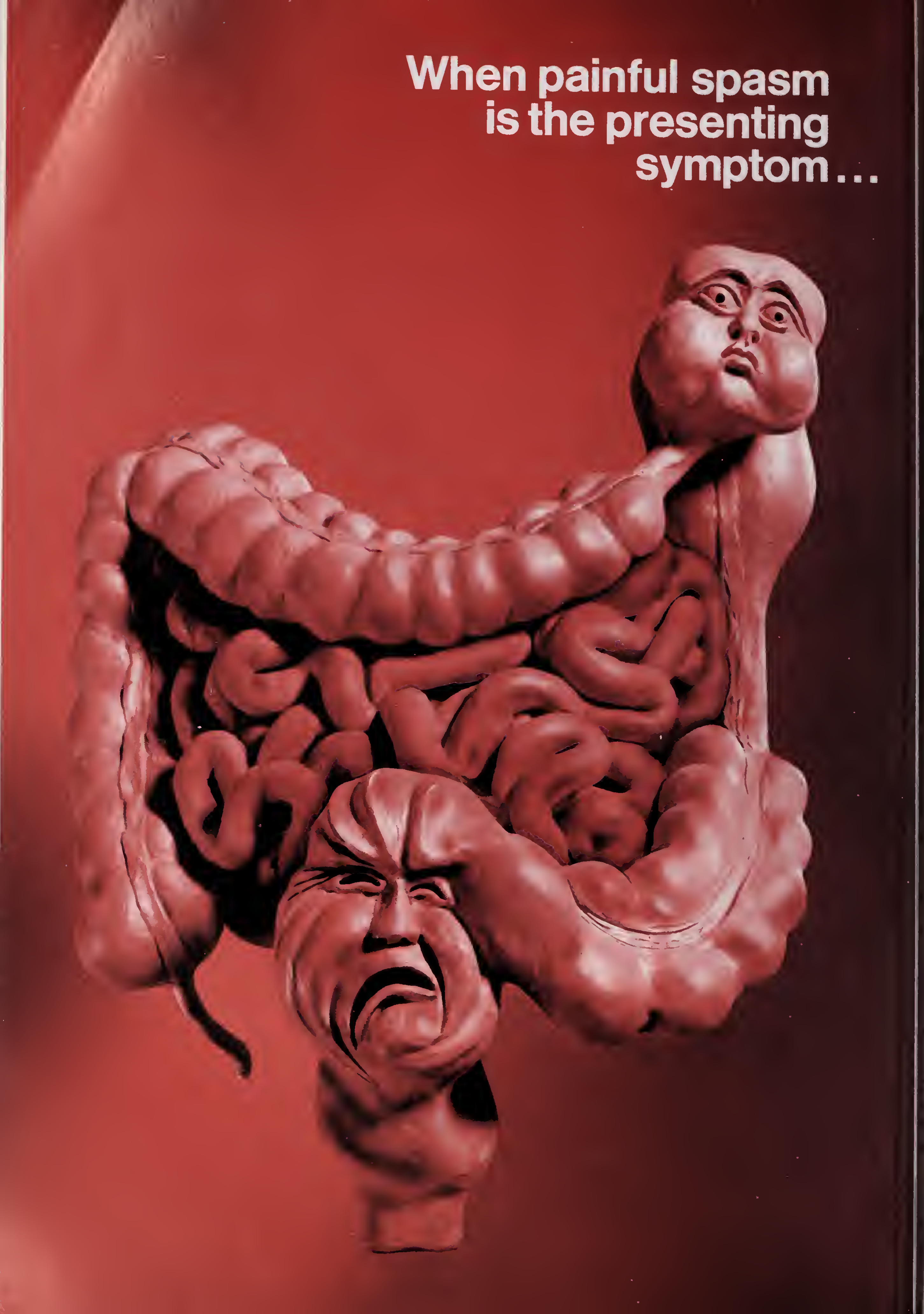
NDC 0108-5022-01
Tagamet® HCl Injection
brand of cimetidine hydrochloride
2 ml.
Each 2 ml. contains
phenol, 10 mg.
SK&F LAB CO.
2 ml.=300 mg.
Tagamet
(cimetidine HCl
300 mg. cimetidine/2 ml.
Tagamet
brand of cimetidine
Tablets
100 tablets
NDC 0108-5013-20
SK&F LAB CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation
SKF
T13

Tagamet®

brand of
cimetidine

How Supplied:
Pale green 300 mg. tablets
in bottles of 100 and Single Unit Packages of 100
(intended for institutional use only).
Injection, 300 mg./2 ml.,
in single-dose vials
and in 8 ml. multiple-dose vials,
both in packages of 10.

SK&F LAB CO.
a SmithKline company


When painful spasm
is the presenting
symptom...

.in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.

Pylorospasm has almost totally blocked passage of barium meal.

Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTIDN

Brief Summary

INDICATIDNS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FOA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL OISOROERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEOATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINOICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Oiarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. AOVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia, nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND AOMINISTRATION Dosage must be adjusted to individual patient's needs.

Usual Dosage. Bentyl 10 mg. capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily *Children.* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults:* 1 tablet three or four times daily. Bentyl Injection: *Adults:* 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENDUS USE. MANAGEMENT OF OVERDOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.

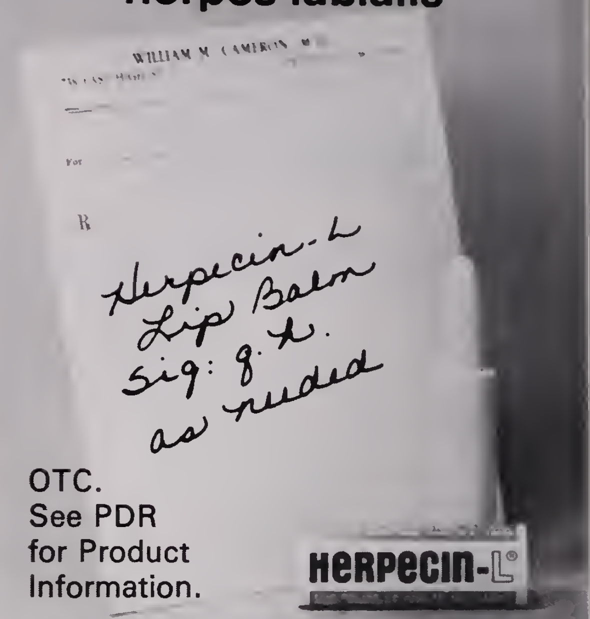
Product Information as of October, 1978.

Injectable dosage forms manufactured by CDNNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Oivision of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati, Ohio 45215, U S A

Dx: recurrent herpes labialis



OTC.
See PDR
for Product
Information.

For samples, write Dept. F at:

CAMPBELL LABORATORIES, INC.
P.O. Box 812, FDR, N.Y., N.Y. 10022

"Herpecin-L" is available at all Medicare and Glaser Drug Stores and other select pharmacies.

Give now . . .

to the Missouri State
Medical Foundation
student loan fund.
Your gift is
100 %
tax-deductible!

The Missouri State Medical Foundation is classified by the Internal Revenue Service under 509(a)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

New Members

Naseer Ahmad, M.D., 1325 South Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Ahmad is a native of Pakistan, received his preliminary education at Forman Christian College and his M.D. degree at King Edward Medical College in 1966. He specializes in cardiovascular diseases and internal medicine.

David Allen Andersen, M.D., 412 Greenleaf, Kirkwood 63122, has become a member of St. Louis Metropolitan Medical Society. Dr. Andersen is a native of Yankton, S. D., received his preliminary education at Iowa State University and his M.D. degree at Washington University in 1975. He specializes in orthopedics.

Jeffrey T. Apter, M.D., 4940 Audubon, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Apter is a native of Johannesburg, South Africa, received his preliminary education at the University of the Witwatersrand and his M.D. degree at the University of the Witwatersrand in 1974. He specializes in psychiatry.

David L. Arunski, M.D., 3535 S. Jefferson, St. Louis 63118, has become a member of St. Louis Metropolitan Medical Society. Dr. Arunski is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at St. Louis University in 1976. He specializes in internal medicine.

Robert D. Bale, M.D., 777 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Bale is a native of Kansas City, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1974. He specializes in obstetrics and gynecology.

Barry J. Bass, M.D., 10020 Walnut, Apt. 201, Kansas City 64114, has become a member of Jackson County Medical Society. Dr. Bass is a native of St. Louis, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1977. He pecializes in general surgery.

Robert J. Blaskiewicz, M.D., 5830 Neosho, St. Louis 63109, has become a member of St. Louis Metropolitan Medical Society. Dr. Blaskiewicz is a native of St. Louis, received his preliminary education at Yale University and his M. D. degree at St. Louis University in 1975. He specializes in obstetrics and gynecology.

F. Douglas Biggs, M.D., 1034 S. Brentwood Blvd., Suite 500, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Biggs is a native of Poplar Bluff, received his preliminary education at Vanderbilt University and his M.D. degree at Washington University in 1972. He specializes in internal medicine and cardiovascular diseases.

James P. Boedeker, M.D., 1035 Bellevue Ave., Suite 205, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Boedeker is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri in 1975. He specializes in obstetrics and gynecology.

William K. Borgsmiller, M.D., 4960 Audubon Ave., St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Borgsmiller is a native of Panama City, Fla., received his preliminary education at the University of Illinois and his M.D. degree at the University of St. Louis in 1972. He specializes in orthopedics.

Adrian R. Bourque, M.D., 937 Broadway, Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. Bourque is a native of New York, N. Y., received his preliminary education at Columbia University and his M.D. degree at Creighton University in 1967. He specializes in therapeutic radiology.

Robert A. Brennan, Jr., M.D., 649 S. New Ballas, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Brennan is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1975. He specializes in obstetrics and gynecology.

Avery B. Brinkley, Jr., M.D., 510 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Brinkley is a native of Thomasville, Ga., received his preliminary education at Emory University and his M.D. degree at Emory University in 1976. He specializes in diagnostic radiology.

Freeman F. Brown, III, M.D., 660 S. Euclid, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Brown is a native of Hartford, Conn., received his preliminary education at Columbia University and his M.D. degree at Washington University in 1975. He specializes in anesthesiology.

Patrick J. Buckley, M.D., 660 S. Euclid, St. Louis 63110, has become a member of St. Louis Metropolitan Medis become a member of St. Louis Metropolitan Medical Society. Dr. Brown is a native of Hartford, Conn., received his preliminary education at Columbia University and his M.D. degree at Washington University in 1976. He specializes in pathology.

Edward L. Burns, Jr., M.D., 621 S. New Ballas, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Burns is a native of Oceanside, Calif., received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri in 1978. He specializes in internal medicine.

Sol F. Cantor, D.O., 272 Glen Hollow Dr., Chesterfield 63017, has become a member of St. Louis Metropolitan Medical Society. Dr. Cantor is a native of Richmond, Va., received his preliminary education at the University of Richmond and his D.O. degree at Kirksville College of Osteopathic Medicine in 1961. He specializes in emergency medicine.

John W. Clarke, M.D., Research Medical Center, 2316 E. Meyer Blvd., Kansas City 64132, has become a member of Jackson County Medical Society. Dr. Clarke is a native of Ashland, Ky., received his preliminary education at the University of Transylvania and his M.D. degree at the University of Louisville in 1951. He specializes in family practice.

Michael H. Coleman, D.O., 2730 N. Grand Ave., St. Louis 63106, has become a member of St. Louis Metropolitan Medical Society. Dr. Coleman is a native of Bellefonte, Pa., received his preliminary education at Antioch College and his D.O. degree at Kansas City College of Osteopathic Medicine in 1977. He specializes in family practice.

Barry J. Cooper, M.D., 10004 Kennerly Rd., St. Louis 63128, has become a member of St. Louis Metropolitan Medical Society. Dr. Cooper is a native of St. Louis, received his preliminary education at Northwestern University and his M.D. degree at the University of Missouri i 1972. He specializes in allergy.

David E. Dugger, M.D., 2318 S. Milto Overland 63114, has become a member of S Louis Metropolitan Medical Society. Dr. Dugge is a native of Pana, Ill., received hs preliminar education at Vanderbilt University and his M.D degree at Vanderbilt University in 1976. H specializes in obstetrics and gynecology.

James G. Dwyer, M.D., 615 S. New Ball Rd., St. Louis 63141, has become a member of S Louis Metropolitan Medical Society. Dr. Dwye is a native of St. Louis, received his prelimina education at St. Louis University and his M.D degree at St. Louis University in 1978. H specializes in internal medicine.

Kenneth J. Eakin, M.D., 615 S. New Balla Rd., St. Louis 63141, has become a member of St Louis Metropolitan Medical Society. Dr. Eakin i a native of Bell City, received his preliminar education at the University of Missouri and hi M.D. degree at Southeast Missouri State University in 1974. He specializes in family practice.

Josiah O. Ekunno, M.D., 6000 W. Florissant St. Louis 63136, has become a member of St Louis Metropolitan Medical Society. Dr. Ekunn is a native of Nigeria, received his preliminar education at the University of Ibadan and hi M.D. degree at the University of Ibadan in 1971 He specializes in obstetrics and gynecology.

James L. Faries, M.D., SR#1, Williamsvill 63967, has become a member of Butler-Wayne Ripley-Carter Medical Society. Dr. Faries is native of Missouri, received his preliminary education at the University of Arkansas and his M.D degree at the University of Tennessee in 1962 He specializes in radiology.

Robert M. Feit, M.D., 554 Kingdel, University City 63124, has become a member of St Louis Metropolitan Medical Society. Dr. Feit is native of St. Louis, received his preliminary education at Indiana University and his M.D. degree at the Indiana University in 1974. He specializes in urology.

Lewis C. Fischbein, M.D., 1034 S. Brentwood Blvd., St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Fischbein is a native of Irvington, N. J., received his preliminary education at the University of Rochester and his M.D. degree at Washington University School of Medicine in 1974. He specializes in rheumatology.

Professional Liability Insurance for Missouri Physicians

BY

Medical Defense Associates, Ltd.

ST. LOUIS/KANSAS CITY RATES

I No Surgery | IIID Urologist, Opthalmology, Proctologist | IVA Otolaryngologist, OBGYN, Plastic
II Minor Surgery | IVB General Surgeon | IVG Thoracic, Neuro, Orthopedists | IVH Anesthesiologists

CLASS	100/300		200/600		500/1,000		1,000/1,000		1,000/2,000	
	1st yr.	Renewal	1st yr.	Renewal	First 3 yrs.	Thereafter	First 3 yrs.	Thereafter	First 3 yrs.	Thereafter
I A	440	220	594	374	514	440	954	880	1,130	1,056
II A	840	420	983	563	980	840	1,400	1,260	1,652	1,512
III D	2,880	1,440	3,744	2,304	3,360	2,880	4,080	3,600	4,800	4,320
IV A	4,896	2,448	6,243	3,795	5,712	4,896	6,446	5,630	7,572	6,756
IV B	3,600	1,800	4,880	3,080	4,200	3,600	4,740	4,140	5,568	4,968
V G	6,240	3,120	7,965	4,836	7,280	6,240	7,748	6,708	9,090	8,050
V H	6,720	3,360	8,434	5,074	7,840	6,720	8,680	7,560	10,192	9,072

You will not be asked to make any additional non-deductible donation, join any particular society, or purchase any form of security. The rates and classifications above will give you an idea of costs although proper application must be made for final acceptance. The premium assessments are subject to adjustment based on actual claims experience.

For additional information please call or write:

MISSOURI MALPRACTICE MANAGERS, 3444-P S. Campbell, Springfield, Missouri 65807
Phone 1-800-492-7212 or (417) 883-0199

Jhonson E. Flores, M.D., 232 S. Woods Mill Rd., Chesterfield 63017, has become a member of St. Louis Metropolitan Medical Society. Dr. Flores is a native of Cochabamba, Bolivia, received his preliminary education at San Simon University and his M.D. degree at San Simon University in 1974. He specializes in anesthesiology.

Ronald J. Gould, M.D., 1035 Bellevue Ave., Richmond Heights 63017, has become a member of St. Louis Metropolitan Medical Society. Dr. Gould is a native of Milwaukee, Wis., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1975. He specializes in gastroenterology and internal medicine.

Edward R. Graviss, M.D., 1465 S. Grand, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Graviss is a native of Philadelphia, Pa., received his preliminary education at the University of Louisville and his M.D. degree at the University of Louisville in 1968. He specializes in pediatric radiology.

Swarn Gupta, M.D., 9823 Beirut Dr., St. Louis 63126, has become a member of St. Louis Metropolitan Medical Society. Dr. Gupta is a native of India, received his preliminary education at Government Medical College and his M.D. degree at Government Medical College in 1971. He specializes in internal medicine.

Yoram Hahn, M.D., 1325 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Hahn is a native of Poland, received his preliminary education in Israel and his M.D. degree at the University of Tel-Aviv in 1970. He specializes in obstetrics and gynecology.

Thomas M. Hawk, M.D., 10004 Kennerly Rd., St. Louis 63128, has become a member of St. Louis Metropolitan Medical Society. Dr. Hawk is a native of St. Louis, received his preliminary education at Yale University and his M.D. degree at St. Louis University in 1973. He specializes in orthopedic surgery.

Jay L. Hoecker, M.D., 3535 S. Jefferson, St. Louis 63118, has become a member of St. Louis Metropolitan Medical Society. Dr. Hoecker is a native of Ft. Worth, Tex., received his preliminary education at Westminster College and his M.D. degree at the University of Texas in 1973. He specializes in pediatrics.

Robert J. Hoffman, M.D., 615 S. New Ballas Rd., St. Louis 63105, has become a member St. Louis Metropolitan Medical Society. D Hoffman is a native of Chicago, Ill., received h preliminary education at the University of Illino and his M.D. degree at St. Louis University i 1976. He specializes in pediatrics.

Jacob Klein, M.D., 777 S. New Ballas Rd., S Louis 63141, has become a member of St. Loui Metropolitan Medical Society. Dr. Klein is a native of Philadelpha, Pa., received his preliminar education at Muhlenberg College and his M.D degree at Jefferson Medical College in 1968. H specializes in obstetrics and gynecology.

Kathryn D. K. Kohler, M.D., 4356 Humbe Circle, St. Louis 63129, has become a member c St. Louis Metropolitan Medical Society. Dr Kohler is a native of Tulsa, Okla., received he preliminary education at the University of Oklahoma and Stanford University and her M.D degree at the University of Utah in 1977. Sh specializes in obstetrics and gynecology.

Jerold J. Kreisman, M.D., 522 N. New Balla Rd., St. Louis 63141, has become a member of St Louis Metropolitan Medical Society. Dr. Kreisman is a native of St. Louis, received his preliminary education from Washington University an his M.D. degree at Cornell University in 1973 He specializes in psychiatry.

Richard J. Kuebel, M.D., 615 S. New Balla Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Kuebe is a native of East St. Louis, Ill., received hi preliminary education at St. Louis University and his M.D. degree at Northwestern University in 1977. He specializes in internal medicine.

David R. Lange, M.D., Washington University, 4960 Audubon Ave., St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Lange is a native of Dayton, Ohio, received his preliminary education at Dartmouth College and his M.D. degree at Washington University in 1974. He specializes in orthopedic surgery.

Warren Conrad Lovinger, Jr., M.D., Barnes Hospital Plaza, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Lovinger is a native of Aberdeen, S. D., received his preliminary education at Central Missouri State University and his M.D. degree at Johns Hopkins University in 1977. He specializes in internal medicine.

Rodolfo L. Maceren, M.D., 1225 Graham Rd., Florissant 63031, has become a member of St. Louis Metropolitan Medical Society. Dr. Maceren is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1966. He specializes in anesthesiology.

George Madjitey, M.D., 1231 Selkirk Lane #8, St. Louis 63125, has become a member of St. Louis Metropolitan Medical Society. Dr. Madjitey is a native of Ghana, received his preliminary education at the University of Toronto and his M.D. degree at Howard University in 1976. He specializes in obstetrics and gynecology.

Jambunathan Mahadevan, M.D., 2075-B Lakerun Ct., Maryland Heights 63043, has become a member of St. Louis Metropolitan Medical Society. Dr. Mahadevan is a native of India, received his preliminary education at St. Benedict's College and his M.D. degree at the University of Ceylon. He specializes in internal medicine.

Mark Joel Mannis, M.D., 8401 Cornell Ave., University City 63132, has become a member of St. Louis Metropolitan Medical Society. Dr. Mannis is a native of Atlanta, Ga., received his preliminary education at Brandeis University and is M.D. degree at the University of Florida in 975. He specializes in ophthalmology.

Raju N. Mantena, M.D., 660 S. Euclid, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Mantena is a ative of India, received his preliminary educa- on at Andhra University and his M.D. degree at ndhra University in 1971. He specializes in nesthesiology.

Homer B. Matthews, M.D., 3535 S. Jefferson, uite 210, St. Louis 63118, has become a member f St. Louis Metropolitan Medical Society. Dr. Matthews received his preliminary education at orthwestern University and his M.D. degree at t. Louis University in 1976. He specializes in mily practice.

Daniel J. Murphy, M.D., 615 S. New Ballas d., St. Louis 63141, has become a member of St. ouis Metropolitan Medical Society. Dr. Murphy a native of Butte, Mont., received his prelimi- ary education at Carroll College and his M.D. egree at St. Louis University in 1976. He ecializes in internal medicine.

Gregory T. Odrezin, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Odrezin is a native of Savannah, Ga., received his preliminary education at Emory University and his M.D. degree at the Medical College of Georgia in 1978. He specializes in radiology.

Katherine Mary Ozanich, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Ozanich is a native of Pittsburgh, Pa., received her preliminary education at the University of Pittsburgh and Washington University and her M.D. degree at Washington University in 1978. She specializes in dermatology.

George J. Pardos, M.D., Barnes Hospital Plaza, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Pardos is a native of New York, N. Y., received his preliminary education at Queens College and his M.D. degree at Yale University in 1975. He specializes in ophthalmology.

David Pesses, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Pesses is a native of Brooklyn, N. Y., received his preliminary education at Cornell University and his M.D. degree at St. Louis University in 1977. He specializes in family practice.

Joseph S. Prosser, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Prosser is a native of East St. Louis, Ill., received his preliminary education at Washington University and his M.D. degree at St. Louis University in 1976. He specializes in internal medicine.

Sudhir R. Raikar, M.D., 3200 S. 13th, St. Louis 63118, has become a member of St. Louis Metropolitan Medical Society. Dr. Raikar is a native of India, received his preliminary education at the University of Bombay and his M.D. degree at the University of Bombay in 1970. He specializes in pediatrics.

Dyapa S. Reddy, M.D., Cardinal Glennon Memorial Hospital for Children, 1465 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Reddy is a native of India, received his preliminary education at Osmania College and his M.D. degree at Osmania College in 1973. He specializes in pediatrics.

John M. Roberts, M.D., Dept. of Psychiatry, University of Missouri Medical Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Roberts is a native of Granite City, Ill., received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1977. He specializes in psychiatry.

Dale H. Rosenberg, M.D., 1035 Bellevue Ave., St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Rosenberg is a native of Springfield, Ill., received his preliminary education at the University of Southern California and his M.D. degree at the University of Illinois in 1953. He specializes in plastic and reconstructive surgery.

Jo-Ellyn M. Ryall, M.D., Malcolm Bliss Mental Health Center, 1420 Grattan, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Ryall is a native of Newark, N. J., received her preliminary education at Rutgers University and her M.D. degree at Washington University in 1975. She specializes in psychiatry.

Robert J. Scheff, M.D., 2821 N. Ballas Rd., St. Louis 63131, has become a member of St. Louis Metropolitan Medical Society. Dr. Scheff is a native of St. Louis, received his preliminary education at Dartmouth College and his M.D. degree at Washington University in 1974. He specializes in internal medicine and gastroenterology.

Richard N. Shatz, M.D., 456 N. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Shatz received his preliminary education at the University of Missouri and his M.D. degree at St. Louis University in 1972. He specializes in plastic surgery.

Rollins L. Tindell, M.D., Barnes Hospital, Barnes Hospital Plaza, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Tindell is a native of Dothan, Ala., received his preliminary education at the University of Alabama and his M.D. degree at the University of Alabama in 1976. He specializes in ophthalmology.

Eldon A. Trame, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Trame is a native of Breese, Ill., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1978. He specializes in internal medicine.

Dolores Reynolds Tucker, M.D., Dept. of Dermatology, 803 Wohl, Barnes Hospital, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Tucker is a native of St. Louis, received her preliminary education at St. Mary's of Notre Dame and her M.D. degree at Washington University in 1974. She specializes in dermatology.

Albert L. Van Amburg, III, M.D., 100 W. Euclid, Suite 1010, St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Van Amburg is a native of Waynesville, received his preliminary education at Washington University and his M.D. degree at Washington University in 1972. He specializes in hematology and oncology.

Mark S. Wald, M.D., 216 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Wald is a native of St. Louis, received his preliminary education at Oberlin College and his M.D. degree at Washington University in 1977. He specializes in internal medicine.

W. H. Winkler, M.D., 3535 S. Jefferson, St. Louis 63118, has become a member of St. Louis Metropolitan Medical Society. Dr. Winkler is a native of Pittsburgh, Pa., received his preliminary education at Concordia Senior College and his M.D. degree at St. Louis University in 1976. He specializes in family practice.

Patricia Barrett Wolff, M.D., 3535 S. Jefferson, St. Louis 63118, has become a member of St. Louis Metropolitan Medical Society. Dr. Wolff is a native of St. Paul, Minn., received her preliminary education at the University of Minnesota and her M.D. degree at the University of Minnesota in 1972. She specializes in pediatrics.

Jae Whan Yoon, M.D., Dept. of Radiology, Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of the Jackson County Medical Society. Dr. Yoon is a native of Korea, received his preliminary education at Korea University and his M.D. degree at Korea University in 1970. He specializes in radiology.

Robert A. Zink, M.D., 3535 S. Jefferson, St. Louis 63111, has become a member of St. Louis Metropolitan Medical Society. Dr. Zink is a native of St. Louis, received his preliminary education at the University of Minnesota and his M.D. degree at the University of Minnesota in 1975. He specializes in family practice.

INDEX TO ADVERTISERS

They Help Make MISSOURI MEDICINE *Possible*

Beltone Electronics Corporation 522
Brentwood Travel Chesterfield Village, Ltd. Tour .. 543
Burroughs Wellcome Co. 517
Campbell Laboratories, Inc. 558
Cooper Laboratories 548
Goetz-Niemer Co. 553
Fred S. James & Co. of Missouri, Inc. 537
Eli Lilly & Company 524
Loma Linda Foods .... Insert (548-549)
Medical Defense Associates, Ltd. 561
Medical Protective Company 553
Merck Sharp & Dohme .... Insert (532-533)
Merrell-National Laboratories .... 516, Insert (516-517), 548, Insert (548-549), Insert (556-557), 557, 558
Metropolitan Ambulance Services Trust 556
MOMEDICO 514
MSMA Tour 538
Munns Medical Supply 545
Ortho Pharmaceutical .... Insert (548-549), 549
Pharmaceutical Manufacturers Association ... 554 & 555
Purepac Pharmaceuticals 544
Roche Laboratories ..... 515, Insert (516-517), 567, 568
SmithKline Diagnostics .... Insert (548-549)
Smith Kline & French .... Insert (556-557)
St. Louis Academy of Family Physicians Medical Forum 543
St. Louis Surgical Society Panel Discussion 516
The Upjohn Company .... Insert (532-533)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

PPORTUNITIES — E.R. physicians to staff E.R. evenings
d weekends for progressive and modern 50-bed hospital in
e center of the Ozarks. City of 6,000; trade area of 20,000
ith expanding population. Lakes, rivers, resorts, golf, etc.
d Farnsworth, Administrator, Salem Memorial District
ospital, P.O. Box 430, Salem, Mo. 65560. (314) 729-6626.

RACTICE FOR SALE — Family practice, three years old.
pidly growing. Excellent potential. South Kansas City.
aving for residency. $45,000. Reply to Box CA-454, Mis-
uri State Medical Association, P.O. Box 1028, Jefferson
ity, Mo. 65102.

T. LOUIS — EMERGENCY MEDICINE work available
onday-Friday days only; full time or part time; paid profes-
nal liability; flexible schedule; Missouri license required.
ll PPG's Laury Kamp at 314-878-2280.

WANTED — OLD X-RAY VIEW BOX — Write to H. Neal Grannemann, M.D., 1000 West 10th, Rolla, Mo. 65401.

OFFICE SUITE IN PROFESSIONAL BUILDING — 1,275 Sq. Ft. (can divide), fully carpeted, panel walls. Immediate occupancy. Excellent location, 9500 block of Natural Bridge in St. Louis County. Parking at door. Call (314) 427-1720 or (314) 837-9970. Girardier.

PHYSICIANS NEEDED SOUTHWEST MISSOURI AREA — Work only two days per week and earn $40,000 annually. Full-time placement also available statewide. Contact Emergency Physician Service, 4725 Wildwood Drive, Springfield, Missouri 65807.

GENERAL SURGEON — To assume large medical-surgical practice in rural-urban area 45 miles from St. Louis following death of owner. Office adjacent to modern general hospital. Phone (314) 625-1888 or (314) 528-4600.

WHAT IS YOUR PRACTICE WORTH? — Most medical practices represent a lifetime investment, yet few are ever sold for their value as a going business. Health Resources provides merger brokerage services to medical practices and hospitals. If you plan to retire or cut back your practice in the next five years, now is the time to plan for a successful sale — when your practice is at its optimum. For more information, call us in confidence: Health Resources, Ltd., River Road Professional Building, Box 12220, Kansas City, Mo. 64152. (816) 587-9020.

CALL 314-636-5744 — For MSMA Impaired Physician Assistance Program. 24-hour answering Service. Calls are confidential.

For MSMA Impaired Physician Program Assistance,

Call 314-636-5744

24-Hour Telephone Answering Service. Calls Are Confidential.

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

It is gratifying that a federal judge recently gave recognition to the importance of medical ethics as a protection to the public. In John R. Brinkley's recent libel and damage suit against Dr. Morris Fishbein as editor of *Hygeia*, in which a verdict in favor of Dr. Fishbein was returned, Federal Judge R. J. McMillan emphasized the significance of medical ethics in his charge to the jury:

"The conduct of the plaintiff Brinkley should not be measured against his own personal ideas with regard to what is proper. It should be measured against the ethics and approved conduct of physicians generally; and to such extent that his conduct as a physician varies from the rules of ethics recognized and observed generally, he becomes subject to criticism, and criticism of his conduct is privileged unless unduly excessive and the terms of the criticism are unreasonable or unfair."

The Clay County Auxiliary and Clay County Medical Society were entertained at an old-fashioned country dinner at the Odd Fellows Home in Liberty. The Auxiliary elected the following officers: President, Mrs. John F. Grace, Excelsior Springs; and secretary-treasurer, Mrs. Aleen Weary, Excelsior Springs.

TWENTY-FIVE YEARS AGO

The 50th Anniversary of the Buchanan County Medical Society was climaxed by a banquet at the Moila Club in St. Joseph on June 2, 1954. Dr. W. W. Bauer of the AMA in Chicago gave a talk. Drs. W. E. Pentz, T. M. Paul and F. H. Spencer of St. Joseph received scrolls in honor of their status as charter members. Dr. I. I. Rosenthal presented a certificate of appreciation for his professional and civic service to Dr. H. E. Peterson, president of the MSMA and a member of the society.

Robert Lamar, M.D., Kansas City, editorializes in "Defense of Vaginal Douche": "In th recent literature, there has been a plethora o articles by gynecologists viewing with exaggerated alarm the even occasional vaginal douche. — Despite intermittent accumulation of cellular debris from both north and south, the vagina is no able to sneeze (reports to the contrary being unsubstantiated), and at least superficial ablutio when the occasion warrants seems only routin first echelon maintenance. Finally, there is thought for those who condemn and decry. Russian officer who had spent some months in th U. S. once told us how happy he had been to ge back to Russia. 'In Russia,' he explained, 'wome smell like women, not like talcum powder. Surely, only a communist and an anosmi gynecologist could condemn unequivocally th judicious vaginal douche."

TEN YEARS AGO

St. Louis University's highest award, the Fleur-de-Lis medal, was presented to Dr. C. Rollins Hanlon, chairman of the Department of Surgery, by Rev. Paul C. Reinert, S.J., University president, at a dinner given in honor of Dr. Hanlon at the St. Louis Club. Dr. Hanlon will leave the university next month to become director of the American College of Surgeons in Chicago.

Eighty-four candidates for the M.D. degree at the University of Missouri School of Medicine repeated the Oath of Hippocrates. They were led by Dr. Norman Asel, professor of medicine. They received their academic hoods in an investiture ceremony led by Dr. Bertis A. Westfall, chairman of the Department of Pharmacology, and Dr. Robert L. Jackson, chairman of the Department of Pediatrics.

Eighty-two class members received their M.D. degrees on June 9 in commencement exercises in Brookings Quadrangle at Washington University.

**efore prescribing, please consult complete product information, a
immary of which follows:**

e effectiveness of Valium (diazepam) in long-term use, that is, more than
months, has not been assessed by systematic clinical studies. The
iysician should periodically reassess the usefulness of the drug for the
dividual patient.

ontraindications: Tablets in children under 6 months of age, known
persensitivity; acute narrow angle glaucoma; may be used in patients
th open angle glaucoma who are receiving appropriate therapy

arnings: As with most CNS-acting drugs, caution against hazardous oc-
pations requiring complete mental alertness (e.g., operating machinery,
iving). Withdrawal symptoms (similar to those with barbiturates, alcohol)
ive occurred following abrupt discontinuance (convulsions, tremor,
odominal/muscle cramps, vomiting, sweating). Keep addiction-prone indi-
duals (drug addicts or alcoholics) under careful surveillance because of
edisposition to habituation/dependence.

> ***Usage in Pregnancy:*** **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

RAL Advise patients against simultaneous ingestion of alcohol and other
NS depressants.

ot of value in treatment of psychotic patients; should not be employed in
u of appropriate treatment. When using oral form adjunctively in convul-
ve disorders, possibility of increase in frequency and/or severity of grand
al seizures may require increase in dosage of standard anticonvulsant
edication; abrupt withdrawal in such cases may be associated with tem-
orary increase in frequency and/or severity of seizures.

JECTABLE: *To reduce the possibility of venous thrombosis, phlebitis, local
tation, swelling, and, rarely, vascular impairment when used I.V.: inject
owly, taking at least one minute for each 5 mg (1 ml) given, do not use
nall veins,* i.e., *dorsum of hand* or *wrist, use extreme care to avoid intra-
erial administration or extravasation. Do not mix or dilute Valium with
her solutions or drugs in syringe or infusion flask. If it is not feasible to
minister Valium directly I.V., it may be injected slowly through the infusion
bing as close as possible to the vein insertion*

minister with extreme care to elderly, very ill, those with limited pulmo-
y reserve because of possibility of apnea and/or cardiac arrest, con-
mitant use of barbiturates, alcohol or other CNS depressants increases
oression with increased risk of apnea, have resuscitative facilities avail-
e. When used with narcotic analgesic eliminate or reduce narcotic dos-
e at least 1/3, administer in small increments. Should not be administered
patients in shock, coma, acute alcoholic intoxication with depression of
al signs.

s precipitated tonic status epilepticus in patients treated for petit mal
tus or petit mal variant status.

hdrawal symptoms (similar to those with barbiturates, alcohol) have oc-
red following abrupt discontinuance (convulsions, tremor, abdominal/
scle cramps, vomiting, sweating). Keep addiction-prone individuals
ler careful surveillance because of predisposition to habituation/
pendence. Not recommended for OB use

cacy/safety not established in neonates (age 30 days or less); pro-
ged CNS depression observed. In children, give slowly (up to 0.25
kg over 3 minutes) to avoid apnea or prolonged somnolence, can be
eated after 15 to 30 minutes. If no relief after third administration,
propriate adjunctive therapy is recommended

cautions: If combined with other psychotropics or anticonvulsants,
efully consider individual pharmacologic effects—particularly with known
npounds which may potentiate action of Valium (diazepam), *i.e.*,
nothiazines, narcotics, barbiturates, MAO inhibitors and antidepres-
ts. Protective measures indicated in highly anxious patients with ac-
npanying depression who may have suicidal tendencies. Observe usual
cautions in impaired hepatic function; avoid accumulation in patients
compromised kidney function. Limit oral dosage to smallest effective
ount in elderly and debilitated to preclude ataxia or oversedation (ini-
2 to 2½ mg once or twice daily, increasing gradually as needed or
ated).

INJECTABLE Although promptly controlled, seizures may return; readminister if necessary, not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, have been observed in patients during and after Valium (diazepam) therapy and are of no known significance.

INJECTABLE Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia

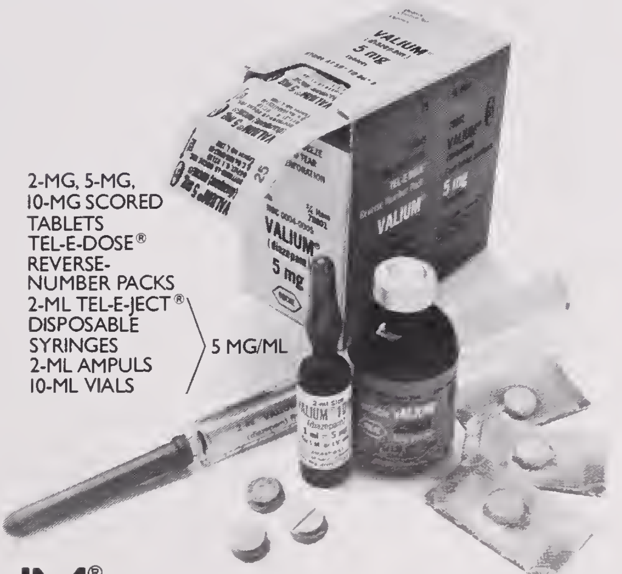
In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure, employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension, caffeine and sodium benzoate for CNS-depressive effects. Dialysis is of limited value

Supplied: Tablets, 2 mg, 5 mg and 10 mg, bottles of 100 and 500; Tel-E-Dose® (unit dose) packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Ampuls, 2 ml, boxes of 10. Vials, 10 ml, boxes of 1. Tel-E-Ject® (disposable syringes), 2 ml, boxes of 10. Each ml contains 5 mg diazepam, compounded with 40% propylene glycol, 10% ethyl alcohol, 5% sodium benzoate and benzoic acid as buffers, and 1.5% benzyl alcohol as preservative

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110


2-MG, 5-MG,
10-MG SCORED
TABLETS
TEL-E-DOSE®
REVERSE-
NUMBER PACKS
2-ML TEL-E-JECT®
DISPOSABLE
SYRINGES
2-ML AMPULS
10-ML VIALS
5 MG/ML

**ONLY VALIUM® (diazepam)
GIVES YOU THIS CHOICE OF DOSAGE
FORMS AND FLEXIBILITY**

19 South 22nd St.
Philadelphia, PA 19103

PSYCHOTHERAPEU

SKELETAL MUSCLE
RELAXANT

ONLY VALIUM® (diazepam) ⒸIV

HAS THESE TWO DISTINCT EFFECTS

Please see preceding page for a summary of product information. ROCHE

Missouri Medicine

Vol. 76, No. 11 (ISSN 0026-6620) November, 1979

MDS

Special Review Article

Hyperthermia

A Modality
of Cancer Therapy
by
Rushdy Abadir, M.D.

Deaths Attributed to Drugs in St. Louis City and County 1977-1978

Carotid Endarterectomy

Editor's Corner

"Whence?"

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

NOV 29 1979

Variability of Clinical Manifestations in Pheochromocytoma

MISSOURI STATE MEDICAL ASSOCIATION

Contents • Page 575

In unity there is strength. That's why there's Momedico.

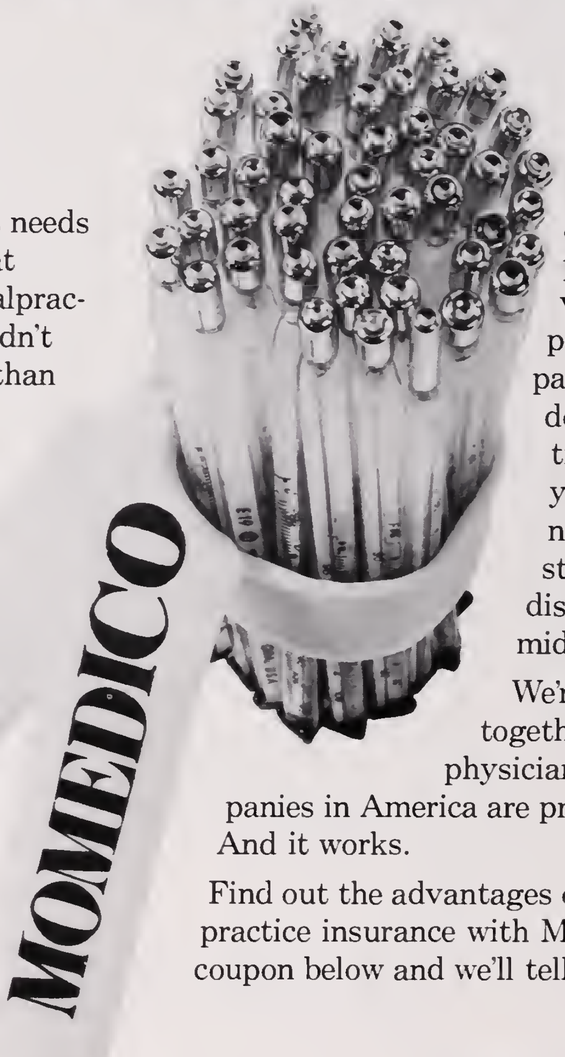
Nobody knows a doctor's needs better than a doctor. That includes your need for malpractice insurance. But shouldn't you be looking for more than just coverage?

That's why there's Momedico. Formed by Missouri doctors, for the protection of Missouri doctors, Momedico is the only professional liability insurance company backed by the Missouri State Medical Association.

With Momedico, you get the needed coverage at a competitive price. You also get a voice in the company's policies. You become part of a doctor-owned, doctor-directed organization that has one goal: your welfare. There are no earnings to retain for stockholders' benefit, no disappearing acts in the middle of a crisis.

We're doctors working together. More than 80,000 physicians in 19 similar companies in America are protected like this. And it works.

Find out the advantages of having your malpractice insurance with Momedico. Just mail the coupon below and we'll tell you the whole story.



☑ Yes. I would like to know more about professional liability insurance with Momedico.
☐ Have your agent call me. (Best time to call ____________)
☐ Send me more information, please

MOMEDICO®
Better Protection. Together.
Sponsored by the Missouri State Medical Association.

NAME ____________
ADDRESS ____________
CITY/RFD ____________
ZIP ____________ PHONE # ____________

Mail to: Momedico, 100 North Broadway, St. Louis, MO 63102 or call Collect (314) 241-4774

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102 Copyright 1979 by Missouri State Medical Association All rights reserved Second Class postage paid Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Associatio 113 Madison Street, Jefferson City, Missouri 65102 Subscription Price: $15.00 Per Year. Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc Fulto Missouri.

A character all its own.

Valium (diazepam/Roche) is a benzodiazepine with a character all its own. Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® Ⓘⓥ
diazepam/Roche

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis, stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d to q.i.d., alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

NOW AVAILABLE
UNDER THE MISSOURI
MEDICAL AID
VENDOR
PROGRAM

Quinaglute® DURA-TABS®
324 mg
(quinidine gluconate)

Cooper Laboratories, Inc.
Wayne, New Jersey 07470
Cooper

109-103

Quinamm™

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS: For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

CONTRAINDICATIONS: Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency. Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

PRECAUTIONS: Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication.
Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

ADVERSE REACTIONS: Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

DOSAGE AND ADMINISTRATION:
1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

U.S. Patent 2,985,558

Merrell

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to:
MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

R 3305 (Y371A)

for Knotts in the night

Quinamm™

each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

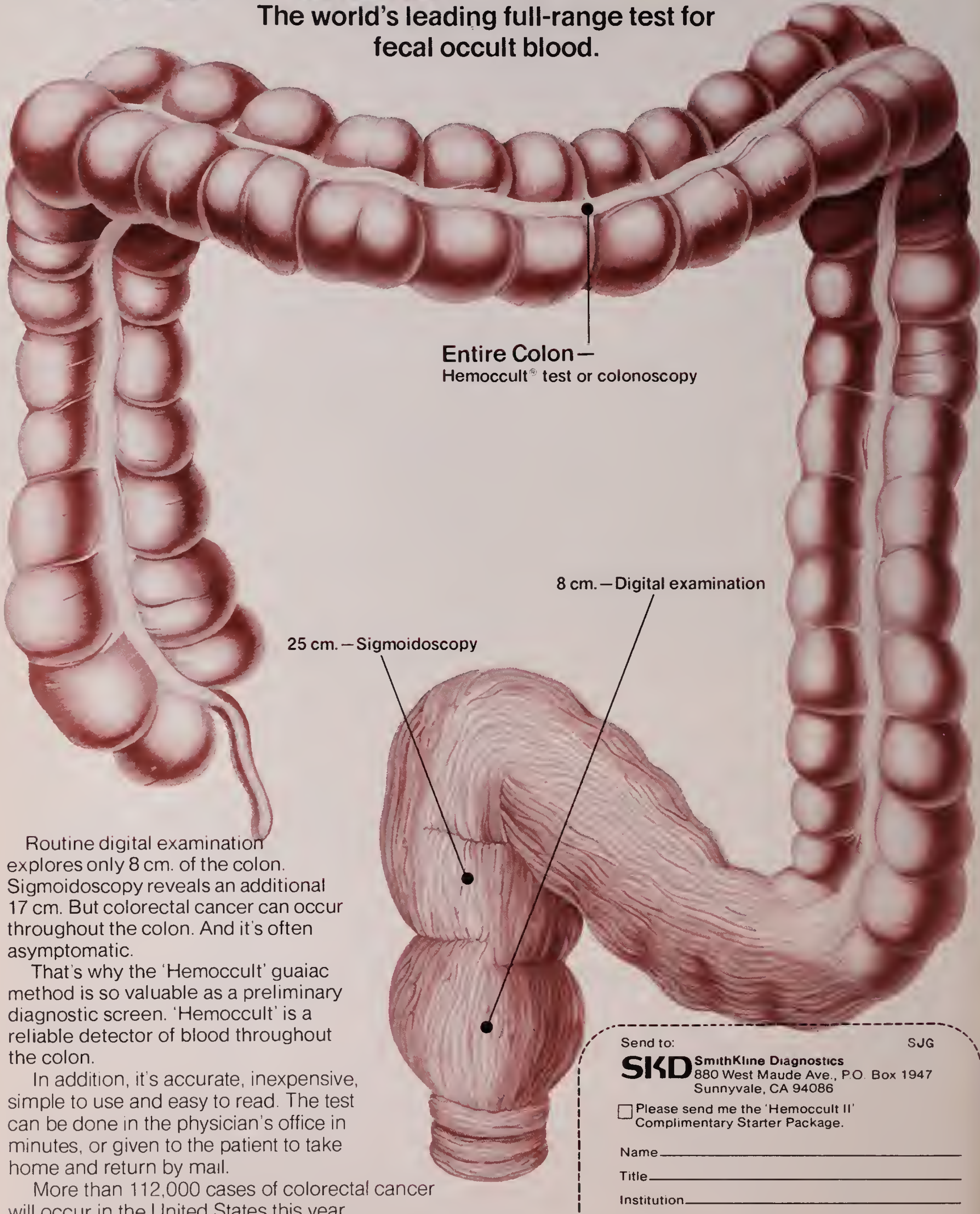
specific therapy for painful night leg cramps

Nocturnal recumbency leg muscle cramping is frequently an unwelcome bedfellow for many patients—especially those with arthritis, diabetes or peripheral vascular disease . . . consider Quinamm . . . simple, convenient dosage—usually just one tablet at bedtime . . . can provide restful, welcome sleep without night leg cramps.

See opposite page for prescribing information.

Hemoccult®

The world's leading full-range test for fecal occult blood.



Routine digital examination explores only 8 cm. of the colon. Sigmoidoscopy reveals an additional 17 cm. But colorectal cancer can occur throughout the colon. And it's often asymptomatic.

That's why the 'Hemoccult' guaiac method is so valuable as a preliminary diagnostic screen. 'Hemoccult' is a reliable detector of blood throughout the colon.

In addition, it's accurate, inexpensive, simple to use and easy to read. The test can be done in the physician's office in minutes, or given to the patient to take home and return by mail.

More than 112,000 cases of colorectal cancer will occur in the United States this year. The earlier they are diagnosed, the greater the chances for successful treatment.

'Hemoccult' is available through local distributors, nationwide.

Send to: SJG

SKD SmithKline Diagnostics
880 West Maude Ave., P.O. Box 1947
Sunnyvale, CA 94086

☐ Please send me the 'Hemoccult II' Complimentary Starter Package.

Name________________

Title________________

Institution________________

Address________________

City________ State______ Zip______

Phone________________

MSMA

NEWS ROUND - UP

November, 1979

Dr. Matthews speaks to Senate Committee on Licensure

Licensure of additional professions is a serious step which must be undertaken with thorough understanding of the limitations it creates and the high costs that result, Dr. John I. Matthews, secretary of the MSMA, told a State Senate Committee on Licensure on October 29 in St. Louis.

The Senate Committee is looking into the need for licensure of additional professionals in nearly all fields. During the 1979 General Assembly, 45 bills calling for licensure of non-licensed personnel were introduced. Fifteen of these bills requested licensure of "paramedical" personnel such as physician's assistants, radiologic technicians, mental health technicians, physical therapy assistants, athletic trainers, social workers, etc.

Dr. Matthews cautioned the Committee that anytime a group is licensed it serves to limit the number of people who can perform certain services. This can lead to shortages of personnel to perform those services and increase the cost of those services when they are available.

Rather than have the Legislature decide on the merits of licensure of a certain group merely by the introduction of a bill, Dr. Matthews suggested that the state set up an investigating panel, under an already established state agency, to determine if licensure is for the benefit of the public or if it is intended to benefit those wishing to be licensed.

After a thorough investigation wherein those seeking licensure would have to meet strict guidelines to prove the actual need, the panel would make its recommendations to the General Assembly for final action.

AMA membership increases

The MSMA has shown its support of the AMA by surpassing its 1978 membership total in the American Medical Association.

As of September 14, 1979, the MSMA had 3,342 AMA dues-paying members. This exceeds the 1978 year-end total of 3,283.

MSMA President protests Hospital Cost Containment Act

MSMA President Andrew McCanse, M.D., recently sent a letter to all Missouri members of the U.S. Congress regarding the "Hospital Cost Containment Act of 1979" (H.R. 2626).

Dr. McCanse's letter asked the Representatives and Senators to "oppose this destructive and unnecessary piece of legislation."

In this inflationary period, health care is the only major component of society which has voluntarily worked to reduce increases in costs, stated Dr. McCanse. If medicine's effort is publicized through House debate, perhaps more components of society will initiate their own voluntary programs to curb inflation.

Dr. McCanse also emphasized that the key word in the cost containment bill is cost and that the stringent proposals of H.R. 2626 would allow for almost no new medical technology. "Quality of care should be equally recognized as an issue of interest to the American people."

MSMA and Board of Healing Arts to discuss issues of mutual concern

The future status of physician's assistants in Missouri and a proposed definition of the practice of medicine in Missouri will be the main topics of discussion when the MSMA and the State Board of Registration for the Healing Arts meet in December.

The Board has been investigating the physician's assistants issue for some time and the MSMA, which is on record as opposed to the licensure of P.A.'s, requested to meet with the Board to discuss the issue.

Earlier this year, the Board sent a proposed definition of the practice of medicine to the MSMA and the Missouri Association of Osteopathic Physicians and Surgeons for comment. At its October meeting, the Board incorporated the suggestions of the two Associations into the proposed definition and the Board is expected to review the newest version at its November meeting. The practice of medicine is not currently defined in Missouri statutes.

Board meets in November

The Missouri State Board of Registration for the Healing Arts meets on Saturday and Sunday, November 3 and 4, 1979, at the Granada Royale, Kansas City. The meeting convenes at 9:30 a.m., Saturday, November 3 and continues on Sunday morning, November 4.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

Dr. Spalding appointed to Board of Healing Arts

Wilber B. Spalding, Jr., M.D., Kansas City, was recently appointed to the State Board of Registration for the Healing Arts by Governor Joseph Teasdale. He replaces James M. Whittico, M.D., St. Louis.

James R. Criscione, M.D., of St. Louis, was elected President of the Board and John H. Walterscheid, M.D., Hannibal, was elected secretary of the group. Officers are elected for one-year terms by other members of the seven-member regulatory board, an agency of the Department of Consumer Affairs, Regulation and Licensing.

Other members of the Board are: Lee E. Davidson, D.O., Kansas City; Mario G. Gonzalez, M.D., Warrensburg; Salvatore Riggio, M.D., St. Louis; and William H. Voss, D.O., Jefferson City.

The Consumer Price Index reports increases in health care components

A report from the Consumer Price Index (CPI), released October 26, 1979, shows that in the first, second and third quarters of 1979 the annualized percentage increases for all items surpassed the increases in physicians' services.

In September, the percentage increase in the all services component (1.3%) exceeded the increase in the all items component (1.0%) and the physicians' services component (0.7%). Medical care services increased 0.8% and hospital room charges rose 0.6%.

The report shows that during the twelve-month period September 1978 through September 1979, the percentage change in the all items price index (12.1%) exceeded that of the all services index (11.6%) which, in turn, exceeded that of the physicians' services price index (9.6%). The medical care price index rose 9.5% and hospital room charges rose 11.3% during that period.

U.S. Medical Directory is not an AMA publication

Physicians should be aware that bills for the U.S. Medical Directory are again being mailed. They are reminded that this is not an official publication of the American Medical Association.

The statement has the following return address: U.S. Directory Service, 121 S.E. 1st Street, P.O. Box 011565, Miami, Florida 33101.

MSMA plans spring workshop for resident physicians

Again in 1980, the Missouri State Medical Association will sponsor an "Establishing Yourself in Medical Practice" workshop.

The seminar will be held May 15-16 at the Marriott Hotel, I-70 at Lambert International Airport, in St. Louis.

Geared to teach the practical aspects of setting up a private practice of medicine, this workshop is specifically designed for residents and physicians leaving the military and prepaid groups.

The program, conducted by a professional consulting practice management firm, Conomikes Associates, is designed to help physicians: hire and train the best personnel; establish efficient telephone and appointment scheduling systems; get financing for the practice; set up the right financial systems for billing, collections and insurance; and design the most effective medical records system.

Brochures detailing the "Establishing Yourself in Medical Practice" workshop were recently mailed to resident physicians throughout Missouri. For further information, please contact the MSMA, Box 1028, Jefferson City, MO 65102. (314) 636-5151.

'Legislative Contacts' needed for 1980 General Assembly

December 1, the date for pre-introduction of bills for the 1980 Missouri General Assembly, is rapidly approaching and with it the need for more "Legislative Contacts."

The upcoming session looks to be a hectic one, with many issues which could prove detrimental to the medical profession and to the health and safety of the people of Missouri. Now is the time to get involved and to begin to relay medicine's stand to the politicians.

When the session is underway, each "Legislative Contact" will receive a weekly Legislative Report informing him of the current status of important bills before the legislature, reporting upcoming committee hearings and requesting the "Contact" to convey medicine's viewpoint to local lawmakers.

A "Legislative Contact" has the responsibility to inform his colleagues of important legislation so they can unite in support of favorable bills and in opposition to unfavorable ones.

The timely Legislative Report is limited to approximately 500 MSMA and MSMA Auxiliary members because the Association can handle that mailing in one day.

The Association is constantly seeking new "Legislative Contacts" who are physicians of legislators or who know their lawmakers well. Interested members are urged to clip the accompanying blank and mail it to the MSMA headquarters.

LEGISLATIVE CONTACT

I would like to participate in the "Legislative Contact" Program.

Please send me additional information.

Name ______________________

Street ______________________

City/State ______________________

Mail to:

Missouri State Medical Association
113 Madison, P.O. Box 1028
Jefferson City, MO 65102

Generics save money. Big money!

The FTC estimates that $400 million ould be saved annually on the nation's x bill if physicians prescribed generics. re you saving *your* patients extra dollars?

Purepac, America's leading manufac- urer of a national brand of generics, ould like to show you the tremendous avings possible with just three of our 700 eneric products:

RUG		AVERAGE RX PRICE (100's)	$ SAVINGS WITH PUREPAC	% SAVINGS WITH PUREPAC
avabid Capsules*	150 mg.	$10.32		
urepac Papaverine	150 mg.	3.95	**$6.37**	61.7%
quanil Tablets*	400 mg.	8.15		
urepac Meprobamate	400 mg.	1.85	**6.30**	77.3%
prium Capsules*	10 mg.	8.76		
urepac Chlordiazepoxide HCl.	10 mg.	3.90	**4.86**	55.4%

egistered trademarks of Marion Labs., Wyeth Labs., Roche Labs., respectively

Purepac generics save money. Big oney. Purepac is dedicated to providing ur patients with quality products that e equivalent to their brand name unterparts at significant savings.

But we can't do it alone. We need ur cooperation.

Send for Purepac's *free* Brand Name/Generic Name Reference Chart today. You'll receive an alphabetical listing of brand name drugs with their generic counterparts.

And next time you write a prescription, write for Purepac brand generics. Your patients will know you care.

PUREPAC. Competitive prices and peace of mind.

FREE!

Please send me my FREE copy of Purepac's Brand Name/Generic Name Chart.

Name________________________

Address______________________

City__________State______Zip____

Mail to Purepac Pharmaceutical Co.,
200 Elmora Avenue, Elizabeth, N.J. 07207

MS 1179

PUREPAC
Elizabeth, NJ 07207
THE LEADING NATIONAL BRAND OF GENERICS

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Rae W. Froelich, M.D., Lebanon
George Bohigian, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
  Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
  Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
  Richard H. Fallon, M.D., St. Louis
  James M. Stokes, M.D., St. Louis
  J. Otto Lottes, M.D., St. Louis
  Theodore L. Paletta, M.D., St. Louis
  Frederick D. Peterson, M.D., St. Louis
  Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Louis P. Hetlage, M.D., Troy
  Vice-Councilor, Paul H. Rother, M.D., St. Charles
5th District, H. Peter Ekern, M.D., Mexico
  Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
  Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
  Donald McIntosh, M.D., Kansas City
  Ronald A. Youmans, M.D., Kansas City
  Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
  Marvin A. Singleton, M.D., Joplin
  Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
  Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
  Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, Wilfred E. Wooldridge, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

Contents for November, 1979

Scientific Articles

Special Review Article

Hyperthermia, A Modality of Cancer Therapy: Rushdy Abadir, M.D. .. 581

Carotid Endarterectomy, *100 Consecutive Operations;* Joe A. Pinkerton, Jr., M.D. and Vijay Gholkar 585

Deaths Attributed to Drugs in St. Louis City and County, *A Brief Survey, 1977-1978;* Alphonse Poklis, M.D. and George E. Gantner, M.D. 588

Commitment of the Mentally Ill in Missouri; Dennis R. Brightwell, M.D., Ahmed D. Faheem, M.D., Jan L. Campbell, M.D. and J. Gregory Neal, M.D. 591

Variability of Clinical Manifestations in Pheochromocytoma, *Case Report;* Stephen Hamburger, M.D. 593

News and Features

MSMA News Round-Up ..... Insert (572-573)

Photo-Comment by James W. Clawson, M.D. 578

Editor's Corner 579

President's Message 597

MSMA Auxiliary 599

In Brief 600

News From the Medical Schools 603

Continuing Education Coming Events ... 606

Component Society News 608

In Memoriam 609

New Members 610

ndex to Advertisers 613

Missouri Medicine In Review 614

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D., Columbia
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
F. Thomas Ott, M.D., St. Louis
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiation Therapy
MacDonald B. Logie, M.D., St. Louis
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

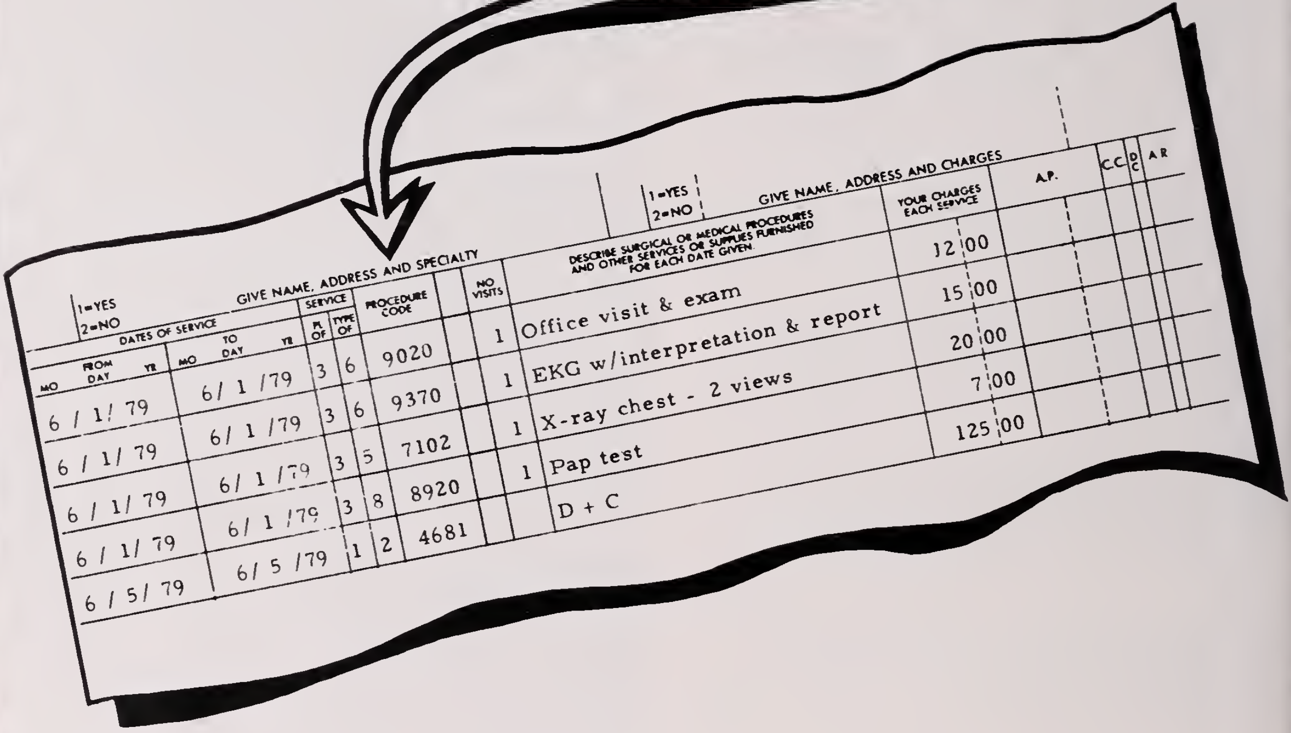
PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102. Copyright 1979 by Missouri State Medical Association. All rights reserved. Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

REPORTING

the numerical code



1=YES 2=NO DATES OF SERVICE FROM MO DAY YR	TO MO DAY YR	SERVICE PL OF	SERVICE TYPE OF	PROCEDURE CODE		NO VISITS	1=YES 2=NO GIVE NAME, ADDRESS AND SPECIALTY DESCRIBE SURGICAL OR MEDICAL PROCEDURES AND OTHER SERVICES OR SUPPLIES FURNISHED FOR EACH DATE GIVEN.	GIVE NAME, ADDRESS AND CHARGES YOUR CHARGES EACH SERVICE	A.P.	C.C.	D C	A R
6 / 1/ 79	6/ 1 /79	3	6	9020		1	Office visit & exam	12 00				
6 / 1/ 79	6/ 1 /79	3	6	9370		1	EKG w/interpretation & report	15 00				
6 / 1/ 79	6/ 1 /79	3	5	7102		1	X-ray chest - 2 views	20 00				
6 / 1/ 79	6/ 1 /79	3	8	8920		1	Pap test	7 00				
6 / 5/ 79	6/ 5 /79	1	2	4681			D + C	125 00				

for each procedure you list
on your Blue Shield Physician's Service Report
according to the NABSP Coding and Nomenclature
shown in your Physician's Office Manual
will mean greater speed and accuracy
in receiving your payment from Blue Shield.

Saint Louis
Blue Shield
A COMMUNITY SERVICE
®

The Upjohn Company announces a new indication for Motrin® (ibuprofen)

A well-tolerated, nonnarcotic prescription for pain

Motrin tablets
400 mg
Sig T q 4-6 h
prn
pain
No. 364-936
Mr. R. Mayer
Motrin 400
ibuprofen
One (1) ev
as necess
AR

© 1979 The Upjohn Company

Motrin now proved an effective analgesic for mild to moderate pain

Motrin 400 mg provided greater relief of pain than did propoxyphene 65 mg in controlled clinical pain studies.

Time after drug administration (hour)		.5	1	2	3	4
Mean relief-of-pain scores* (No. patients reporting)	Motrin 400 mg ibuprofen	.89 (108)	1.25 (108)	1.36 (108)	1.28 (107)	1.19 (106)
	Darvon 65 mg propoxyphene	.66 (100)	.99 (99)	1.13 (96)	.99 (96)	.80 (96)
Statistical significance		$p<0.02$	$p<0.01$	$p<0.05$	$p<0.02$	$p<0.002$

*0 = No relief   1 = Partial relief   2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

Motrin 400 mg TABLETS

ibuprofen, Upjohn

- Not a narcotic • Not addictive • Not habit forming
- Rapid analgesic action • Indicated in acute and chronic pain
- Well tolerated. The most common side effect with Motrin is mild gastrointestinal disturbance.

Please turn the page for a brief summary of prescribing information.

Upjohn

Motrin® (ibuprofen) now proved an effective analgesic for mild to moderate pain

Motrin® Tablets (ibuprofen, Upjohn)

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin:* used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,* epigastric pain,* heartburn,* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,* headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Rheumatoid and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain.

Do not exceed 2400 mg per day.

Caution: Federal law prohibits dispensing without prescription.

For additional product information, see your Upjohn representative or consult the package insert.

MED B-4-S

Upjohn
THE UPJOHN COMPANY
Kalamazoo, Michigan 49001 USA

J-7280-4

August, 1979

ALDORIL®
ALDORIL®
ALDORIL®
ALDORIL®
containing methyldopa and hydrochlorothiazide

TABLETS
ALDORIL®-25
containing 250 mg ALDOMET® (Methyldopa, MSD)
and 25 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL®-15
containing 250 mg ALDOMET® (Methyldopa, MSD)
and 15 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL® D30
containing 500 mg ALDOMET® (Methyldopa, MSD)
and 30 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

TABLETS
ALDORIL® D50
containing 500 mg ALDOMET® (Methyldopa, MSD)
and 50 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

Merck Sharp & Dohme, Division of
Merck & Co., Inc., West Point, PA 19486

MSD
MERCK
SHARP&
DOHME

Copyright © 1979 by Merck & Co. Inc.

J9AR13

Professional Liability Insurance for Missouri Physicians

BY

Medical Defense Associates, Ltd.

ST. LOUIS/KANSAS CITY RATES

I No Surgery IIID Urologist, Opthalmology, Proctologist IVA Otolaryngologist, OBGYN, Plastic
II Minor Surgery IVB General Surgeon IVG Thoracic, Neuro, Orthopedists IVH Anesthesiologists

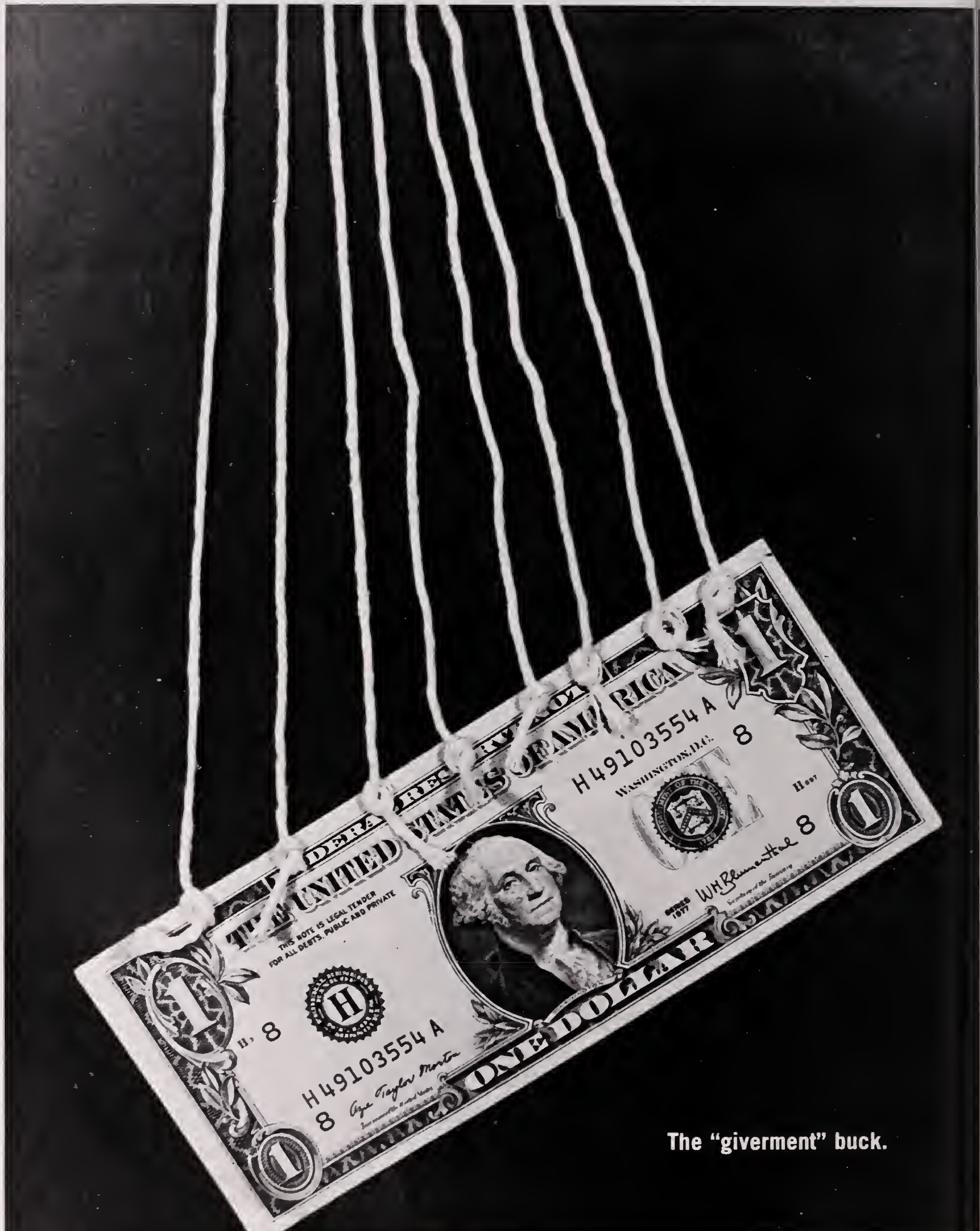
CLASS	100/300		200/600		500/1,000		1,000/1,000		1,000/2,000	
	1st yr.	Renewal	1st yr.	Renewal	First 3 yrs.	Thereafter	First 3 yrs.	Thereafter	First 3 yrs.	Thereafter
I A	440	220	594	374	514	440	954	880	1,130	1,056
II A	840	420	983	563	980	840	1,400	1,260	1,652	1,512
III D	2,880	1,440	3,744	2,304	3,360	2,880	4,080	3,600	4,800	4,320
IV A	4,896	2,448	6,243	3,795	5,712	4,896	6,446	5,630	7,572	6,756
IV B	3,600	1,800	4,880	3,080	4,200	3,600	4,740	4,140	5,568	4,968
IV G	6,240	3,120	7,965	4,836	7,280	6,240	7,748	6,708	9,090	8,050
IV H	6,720	3,360	8,434	5,074	7,840	6,720	8,680	7,560	10,192	9,072

You will not be asked to make any additional non-deductible donation, join any particular society, or purchase any form of security. The rates and classifications above will give you an idea of costs although proper application must be made for final acceptance. The premium assessments are subject to adjustment based on actual claims experience.

For additional information please call or write:

MISSOURI MALPRACTICE MANAGERS, 3444-P S. Campbell, Springfield, Missouri 65807
Phone 1-800-492-7212 or (417) 883-0199

Photo-Comment by James W. Clawson, M.D., Springfie



The "giverment" buck.

Editor's Corner

WHENCE?

It was not long ago that I sat with a friend in one of St. Louis's fine restaurants while we dined in capitalistic splendor and discussed the condition of our capitalistic society.

Said I, "It is a great shame. I am very much afraid America has developed too rapidly. Our culture has not been able to assimilate the abundance which has blessed us. As a result of the misuse of various surfeits, there are various indigestions, economic, moral and political. I fear our society has become soft enough that we are ripe for some degree of civil strife. We could fall. Who would take over? The communists?"

"Not so," said my friend. "Not first, anyway. We are ripe to become a fascist state, and it could be very soon."

"How soon," I asked.

"The beginning could come as quickly as 1980," came the reply. "It would require more stepwise time to realize what had happened."

"Why 1980," I asked.

At this point, I should add that the person who sat across the table is an extremely astute, respected and authoritative scholar who gets paid for his opinions. I certainly would not attempt to fault his reasoning and I pass it along for your consideration. I repeat it as verbatim as a martini and a bottle of wine permit.

"The United States of America," he said, "is bankrupt. Any business as shaky would have been foreclosed long since. However, being a government, it has printed legal, but increasingly worthless money to pay its debts. Everyone knows this because of the decline in purchasing power of the dollar and the increase in money supply. It is backed by nothing. It survives on its reputation, and that is wearing damn thin.

"Because of increasing expenditure of these shrinking dollars, we will either be forced to repudiate our debts or else sell more and more of our remaining assets in exchange for imports because we will not change our ways and tighten our belts. Therefore, we can be put to the wall in either of two ways. The first would be by having foreign interests no longer accept our worthless dollars. The second, with the same result, would be a major internal political upheaval by the emergence of a president who is so deeply committed to the consuming segments of our society that he must assume the role of dictator. This could commit us to a ruinous continuation of the deficit spending which is bleeding us white. He may still have the title of president, but that will be the end of the presidency as we know it. And it will also be the end of the republic as we know it.

"The seeds were sown long ago," he continued. "Early in his first term, Franklin Delano Roosevelt said in one of his speeches, "If the nation is living within its income, its credit is good. If in some crisis it lives beyond its income for a year or two, it can usually borrow temporarily on reasonable terms. But, if, like the spendthrift, it throws discretion to the winds, is willing to make no sacrifice at all in spending, extends its taxing up to the limit of the people's power to pay, and continues to pile up deficits, it is on the road to bankruptcy."*

"It has taken us a major war, two lesser wars and almost 50 years, but," he added, "the play is about to end."

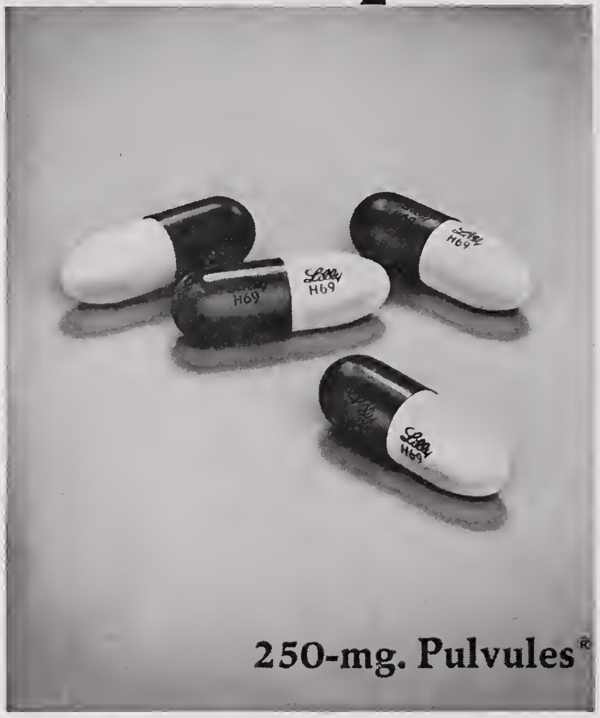
Don't blame me! I didn't say it. He did. But please keep in mind that history substantiates him. If you don't believe it, buy yourself a copy of "The Lessons of History"" by Will and Ariel Durant. In 1971, my copy cost $5.00.

Wilfred E. Wooldridge, M.D.

---

* F. D. Roosevelt: Speech at Pittsburgh, Oct. 19, 1932.

easy to take


Lilly
H69
250-mg. Pulvules®

Oral Suspension
250 mg./5 ml.
100 and 200-ml.
sizes
125 mg./5 ml.
60, 100, and
200-ml. sizes

Pediatric Drops
100 mg./ml.
10-ml. size

Keflex®
cephalexin

Lilly

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

500738

Volume 76, Number 11 — November, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

COPYRIGHT, 1979 BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

Special Review Article

RUSHDY ABADIR, M.D., *Columbia*

Hyperthermia

A Modality of Cancer Therapy

HEAT is perhaps the most readily recognizable and most available energy form on earth. It was recognized by the ancient philosophers as one of the five-fold constituents of "reality" which are air, earth, water, sky and fire. Heat has been used in the healing arts since ancient times. One of the oldest records in the Egyptian "Edwin Smith Papyrus"[1] in 3000 BC mentioned the use of cautery in medicine. Hippocrates' aphorism was "fire will succeed where all other measures fail."[2] Heat has been applied locally or to the whole body (as hot water or hot sand baths or fever therapy) for a multitude of conditions such as aches, pains, tertiary syphilis or gonorrhea. Reports of regression of cancer as a response to hyperthermia have been known since the end of the 18th century.[3]

HYPERTHERMIA IN CANCER THERAPY

A. *Systemic Hyperthermia*

Coley[3] reported tumor regression in patients who developed fever from erysipelas. He later prepared toxins to induce fever in cancer patients. With temperatures of the order of 38.8 C to 39.5 C, tumor regression was noted.[4] Later, more purified vaccines were prepared. Purification, however, eliminated their pyrogenic character with consequent loss of tumor response and gradual loss of clinical interest by physicians.

Warren[5] used cabinets with diathermy or carbon filaments to induce systemic hyperthermia to 41.5 C for 24 hours. He reported prompt improvement in 29 of 32 patients with advanced cancer.

Pettigrew[6] induced total body hyperthermia by a paraffin wax bath and heated air endotracheally. Temperatures of the order of 41.8 C were reached. He reported responses in four of four soft tissue sarcomas, eight of 13 gastrointestinal cancers and three of eight melanomas.

B. *Localized Hyperthermia*

Local or regional hyperthermia has also been utilized in cancer patients with favorable results. Thus, Stehlen[7] treated stage III A melanomas of the lower limbs of 27 patients by perfusion with

This article initiates a series which we hope will be run in MISSOURI MEDICINE in alternate issues. The series results from suggestions from members of the Editorial Board and from members of the MSMA.

These review articles will deal with timely medical subjects. They will be written by individuals who are recognized authorities in these particular clinical fields.

It is hoped that these articles will be helpful to the generalist and will be of aid to all in keeping abreast of medical progress. — EDITOR

melphalan and without heating. The local response rate was 38% and the five-year survival was 22%. When he used heated blood perfusion (skin and muscle temperature 38 C to 40 C) in treating 30 patients, the local response rate was 80% and the five-year survival was 76%. In seven years, he reported 185 hyperthermia perfusions in 165 patients with two deaths (1.1%) and three limb amputations (1.3%) because of necrosis.

Hartman[8] reported on the combination of heat and irradiation in five patients with osteogenic sarcoma. After surgical exposure, heat was delivered from a microwave source to the tumor to raise the temperature to 60 C for 15 minutes. Two of five (one with systemic hyperthermia also) patients were long survivors.

Cavalierre[9] perfused warmed blood (temperature of 41.5 C to 43 C) in extremity tumors. Eighteen of 22 patients were evaluable. All except three responded. Four of seven melanomas were controlled seven to 28 months by heat alone.

With such historical background, interest has been accentuated recently in hyperthermia. Therefore, the American College of Radiology arranged for two yearly international conferences on the subject. The first was held in Washington, D. C. in April, 1975 and the second was in Essen, W. Germany in October, 1977. Another international conference was sponsored by the New York Academy of Science and held in New York in March, 1979. As a result at the present time, more centers are employing hyperthermia in clinica situations. Thus Hornback[10] tested 72 cancer pa tients with heat and radiation in two groups. Al the patients in his non-randomized study ha symptomatic, advanced histologically-prove cancer which did not respond to standard treat ment. The majority of tumors were in head an neck (23), gastrointestinal (18) and gynecologica (16). When heat was used before irradiation, 32 o 60 patients (53%) experienced complete remis sion. When radiotherapy was applied befor hyperthermia, 11 of 12 (92%) patients achieve complete remission. Mendecki *et al*[11] used mi crowave with 915 or 2,450 MHz to treat cutaneou malignancies to a temperature of 42.5 C to 43 with "encouraging results." Marmor and Hahn[1 used ultrasound as a source of heating for cance patients. They reported "tumor responses" in 1 patients who previously had radiotherapy 4,400 11,000 rads of irradiation.

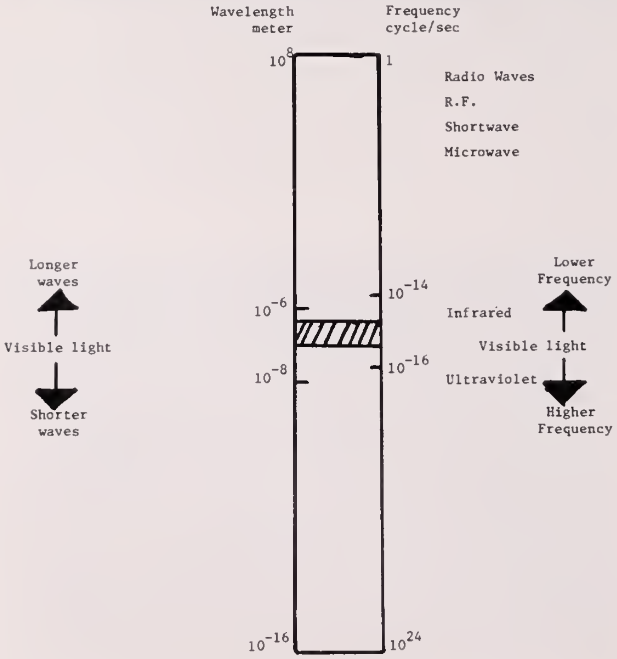


Fig. 1 Diagram of Electromagnetic Spectrum.

PHYSICS OF HEAT

Sources of Heat

The main sources of heat that have been use for induction of hyperthermia are the following

1. Microwave
2. Short wave
3. RF (radiofrequency)
4. Ultrasound
5. Hot water bath
6. Hot air chamber
7. Inhalation of hot air

Microwave, short wave, RF and infrared ar electromagnetic waves. Fig. 1 shows the place o these waves within the electromagnetic spec trum.

The microwave is superior to infrared in that i can penetrate with frequencies below 10,00 MHz. Penetration is greater with less content o water (e.g., fat and bone) than with high conten of water (e.g., skins and mucous membranes) The Federal Communications Commission ha assigned two frequency bands for the medical us of microwave. These are 2450 ± 50 MHz and 91 ± 13 MHz. Differences of the order of ½ C ca induce profound changes in the biological result Hence, accuracy of application and measuremen is needed.

Ultrasound deals not with electromagneti waves but is an acoustic vibration, i.e. longitudinal compression waves. Ultrasound waves trave in water and tissues but not in gas. Frequency i higher than can be perceived by the human ea which perceives frequencies below 17,000 cycle per second while ultrasound has frequencies above 17,000 cycles per second.

Heat Measurement

Thermocouples and thermisters are the two main ways of measuring temperature.

Thermocouples

Two wires of different metals (e.g., copper and constantan) are welded at their ends. If one end is at a higher temperature, an electromagnetic current is created which can be measured by a voltmeter and can indicate the temperature.

Thermister

The principle of the thermister (thermal resistor) is the increase of resistance of a metal conductor to electricity with rise of temperature. The measurement of electric current will thus indicate change of temperature. More detailed description will not be discussed in this clinical article.

Reports of regression of cancer as a response to hyperthermia have been known since the late 1800s. With this historical background, interest in hyperthermia has been accentuated recently. This review includes a discussion of the biological features of hyperthermia. Its differential effect on cancer and normal cells leads to a therapeutic gain, which is the rationale for using it for cancer therapy.

Dr. Abadir is Professor and Chief, Section of Radiation Oncology, Department of Radiology, University of Missouri Medical Center.

BIOLOGICAL CONSIDERATIONS

Hyperthermia is lethal to cells both in vivo and in vitro. Normal cells as well as neoplastic cells can be killed by heat.[9, 13, 14]

Hypoxic cells are more sensitive to heat but more resistant to ionizing radiation than oxygenated cells.

The apparent explanation for this is that a hypoxic cell has a lower metabolic rate and, in the state of oxygen deficiency, cannot cope with the increased metabolism necessarily imposed at higher temperatures. The reverse is required for x-ray sensitivity in which a cell must be biologically active and, therefore, is less radiosensitive when poorly oxygenated.

Hyperthermia is most effective in DNA synthetic phase of the cell cycle (S-phase) while a cell in mitosis (M-phase) is most sensitive to ionizing radiation.

Dickson[18] reported that a primary Yeshida tumor on the foot of a rat heated to 42 C can be destroyed. However, an interesting finding was that if heating was insufficient (40 C), not only the tumor resumed exponential growth but there was enchanced spread of the cancer with distant metastases. Suit[19] worked with fibrosarcomas transplanted in mice and made the same conclusion.

COMBINATION OF HYPERTHERMIA AND IONIZING RADIATION

Synergism exists between hyperthermia and ionizing radiation. Robinson[20] transplanted mammary carcinoma in CH3 mice. He found that the tissue culture dose (TCD_{50}) was 5,250 rads without heating while it was 3,800 rads, 1,920 rads and 1,230 rads with temperatures of 41 C, 42.5 C and 43 C for 60 minutes respectively. Overgaard and Overgaard[21, 22] irradiated anaplastic carcinomas transplanted in mice to a dose of 1,600 R with no local cure. When the same dose was given with heating to 42.5 C for 60 minutes, the local cure rate was 77%. Suit[23] transplanted mammary carcinoma into the foot pads of mice. He found that the isoeffect was 7,060 rads without heating, 5,980 rads at 41.5 C, 4,090 rads at 42.5 C and 3,770 rads at 43.5 C.

Dewey *et al*[24] reported that the S-phase of the cell cycle was more sensitive to heat and irradiation than to irradiation alone. Ben-Hur *et al*[25] showed that hyperthermia inhibits repair of sublethal damaged induced by irradiation. He also showed that the effect was more marked with low dose irradiation. Typically, brachytherapy (radium or radium substitute therapy) is low-dose rate irradiation compared with teletherapy (external therapy).

For successful application of hyperthermia in cancer therapy, there should be a differential effect on neoplastic and normal cells ending in "therapeutic gain." Fortunately, such effect exists. Thus, Robinson and Wizenburg[20] showed that hyperthermia to 43 C enhances the effect of radiation 2.06 times on mouse skin but 4.33 times on C3H mammary tumor.

The sequence of application of hyperthermia and radiation can be important. Saparato *et al*[26] reported that the maximum interaction between the two modalities occurred when they were applied simultaneously. They[27] later compared simultaneous heating effect with that of irradiation between split heat treatments using Chinese hamster ovary cells. They found the effect to be equal if the time between heat treatments was less than 10 minutes but greater survival of cells with increasing time.

Conclusions

1. Hyperthermia of the order of 42 C can be lethal to cells.
2. There is differential effect of hyperthermia on cancer and normal cells leading to a therapeutic gain. This is the rational of using hyperthermia for cancer therapy.
3. Hyperthermia can be combined with ionizing radiation or chemotherapy.
4. Hyperthermia can be applied locally or systemically.
5. The most common sources of heat production are microwave and ultrasound.
6. The major problems at the present time are the induction of hemogeneous heat distribution in a tissue volume and heat measurement by noninvasive techniques.

References

1. Brested, J. H.: The Edwin Smith Surgical Papyrus, Chicago, 1930.

2. Laforgue Sainte Rose, J.: Considerations sure les propriete physiques due calorique et sur les avantages de son application comme moyen therapeutique. Paris, 1819.

3. Coley, W. B.: The Treatment of Malignant Diseases by Repeated Inoculations of Erysipeles. Am. J. Med. Sci. 105:487, 1893.

4. Coley, W. B.: The Therapeutic Value of the Mixed Toxins of Streptococcus of Erysipeles and Bacillus Prodigiusus in the Treatment of Inoperable Malignant Tumors. Am. J. Med. Sci. 112:251, 1896.

5. Warren, S. L.: Preliminary Study of the Effect of Artificial Fever Upon Hopeless Tumor Cases. Am. J. Roent. 33:75, 1935.

6. Pettigrew, R. T., Galt, J. M., Upgate, C. M., Horn, D. B. and Smith, A. N.: Circulatory and Biochemical Effects of Whole-Body Hyperthermia. Br. J. Surg. 61:727, 1964.

7. Stehlen, J. S., Giovanella, B. C., Ipolyi, P. D., Muenz, L. R. and Anderson, R. T.: Results of Hyperthermic Perfusion for Melanoma of the Extremities. Sur. Gyn. and Obst. 140:339, 1975.

8. Hartman, J. T. and Crile, G., Jr.: Heat Treatment of Osteogenic Sarcoma. Clin. Orthopaed. 61:269, 1968.

9. Cavalierre, R., Ciocatto, E. C., Gionvanella, B. C. *et al:* Selective Heat Sensitivity of Cancer Cells: Biochemical and Clinical Studies. Cancer 20:1351, 1967.

10. Hornback, N. B., Shupe, R., Shidnis, H., Joe, T. B., Sayse, E., George, R. and Marshall, C.: Radiation and Microwave Therapy in the Treatment of Advanced Cancer. Radiol. 130:459, 1979.

11. Mendecki, J., Friedenthal, E. and Botstein, C.: Microwave-Induced Hyperthermia in Cancer Treatment: Apparatus and Preliminary Results. Int. J. Rad. Onc., Biol., Phys. 4:1095, 1978.

12. Marmor, J. B. and Hahn, G. H.: Ultrasound Heating in Previously Irradiated Sites. Int. J. Rad. Onc., Biol., Phys. 4:1029, 1978.

13. Harisiadis, L., Hall, E. J., Kralijavic, V. and Borek, C.: Hyperthermia: Biological Studies at the Cellular Level. Radiol. 117:447, 1975.

14. Kim, S. H., Kim, J. H. and Hahn, E. W.: The Radiosensitization of Hypoxic Tumor Cells by Hyperthermia. Radiol. 114:727, 1975.

15. Dickson, J. A. and Muckle, D. S.: Total-Body Hyperthermia Versus Primary Tumor Hyperthermia in the Treatment of the Rabbit VX-2 Carcinoma. Cancer Res. 32:1916, 1972.

16. Gerner, E. W., Boone, R., Connor, W. G., Hicks, J. A. and Boone, M. L. M.: A Transient Thermotolerant Survival Response Produced by Single Thermal Doses in HeLa Cells. Cancer Res. 36:1035, 1976.

17. Crile, G., Jr.: The Effects of Heat and Radiation on Cancers Implanted on the Feet of Mice. Cancer Res. 23:372, 1963.

18. Dickson, J. A. and Ellis, H. A.: The Response of the Solid Yoshida Sarcoma in the Rat to Elevated Temperature (40°-42°). Cancer Res. (in press).

19. Suit. H. D.: Hyperthermic Effects on Animal Tissues. Radiol. 123:483, 1977.

20. Robinson, J. E. and Wizenburg, M. J.: Thermal Sensitivity and the Effect of Elevated Temperatures on the Radiation Sensitivity of Chinese Hamster Cells. Acta Radiolog., Ther., Phys., Biol. 13:241, 1974.

21. Overgaard, K. and Overgaard, J.: Investigations on the Possibility of a Thermic Tumor Therapy. I. Short-Wave Treatment of a Transplanted Isologous Mouse Mammary Carcinoma. Eur. J. Can. 8:65, 1972.

22. Overgaard, K. and Overgaard, J.: Investigations on the Possibility of a Thermic Tumor Therapy. II. Action of Combined Heat-Roentgen Treatment on a Transplanted Mouse Mammary Carcinoma. Eur. J. Can. 8:573, 1972.

23. Suit, H. D.: Consideration of Fractionation Schedules for Radiation Dose. Radiol. 105:151, 1972.

24. Dewey, W. C., Hopwood, L. E., Saparetto, S. A. and Gerweck, L. E.: Cellular Responses to Combinations of Hyperthermia and Radiation, presented at the Radiological Society of North America Symposium on Hyperthermia, Chicago, Ill., 1975.

25. Ben-Hur, E., Elkind, M. D. and Brenk, B. V.: Thermally Enhanced Radio Response of Cultured Chinese Hamster Cells: Inhibition of Repair of Sublethal Damage and Enhancement of Lethal Damage. Rad. Res. 58:38, 1974.

26. Saparato, S. A., Hopewood, L. E. and Dewey, W. C.: Combined Effects of X-Irradiation and Hyperthermia on CHO Cells for Various Temperatures and Orders of Application. Rad. Res. 73:221, 1978.

27. Saparato, S. A., Raaphorst, G. P. and Dewey, W. C.: Cell Killing and Sequencing of Hyperthermia and Radiation. Int. J. Rad. Onc., Biol., Physics 5:343, 1979.

JOE A. PINKERTON, JR., M.D. *and*
VIJAY GHOLKAR, M.D., *Kansas City*

Carotid Endarterectomy

100 Consecutive Operations

STROKE remains a major and often devastating complication of atherosclerotic vascular disease. Atherosclerosis in the extracranial carotid arteries is a common cause of stroke, which is often preceded by transient symptoms suggesting its presence. The evaluation of patients who have good functional recovery after a stroke and patients with transient ischemic attacks using noninvasive laboratory techniques and angiography may result in the detection of cerebrovascular disease which is surgically correctable.

Carotid endarterectomy has proven to be an effective method of reducing the risk of stroke in this group of patients.[1] This report details the results of 100 consecutive carotid endarterectomies for the management of extracranial carotid atherosclerosis in symptomatic patients.

MATERIAL

One hundred carotid endarterectomies were performed by the author in 85 patients between March, 1974 and September, 1978 in St. Luke's Hospital of Kansas City. Ages ranged from 39 to 76 with 85% of the operations being performed on patients between 55 and 75 years of age. Sixty patients were men and 25 were women. Symptoms were present in all patients and included transient ischemic attack in 78 patients and stroke with partial or complete recovery in seven patients.

Evaluation of this group of patients included a thorough assessment of the neurologic, cardiovascular and general health status, while looking for other potential causes for the symptomatology as well as evaluation of operative risk. Brain scan, computerized tomography of the brain and periorbital Doppler cerebrovascular evaluation were employed selectively in the neurologic evaluation of these patients. Arch aortography and selective catheterization with biplane evaluation of the cervical and intracranial portions of each carotid artery were performed routinely when possible. Vertebral evaluation was done as indicated. Atherosclerosis of a severe degree was found in the contralateral internal carotid artery in 37 patients (44%), including complete occlusion in 11 patients (13%) and severe stenosis in 26 patients (31%).

All 85 patients were felt to have angiographically demonstrable atherosclerosis as the most likely explanation for their symptoms. Unilateral carotid endarterectomy was performed in 70 patients and included 40 operations on the left side and 30 operations on the right side. Fifteen patients underwent staged bilateral carotid endarterectomies. Twelve of the 15 underwent the second operation one week to one month after the first operation for severe asymptomatic contralateral internal carotid stenosis. Transient ischemic attacks related to the contralateral carotid artery developed in three of the 15 patients ten, 22 and 31 months after the initial operation, and they underwent contralateral carotid endarterectomy at that time.

Operations were performed on patients under general normocarbic anesthesia using continuous arterial pressure monitoring and systemic

---

The authors discuss the surgical management of 85 symptomatic patients on whom 100 endarterectomies were performed. A comparison of the results with the predictable natural history of patients with symptomatic carotid atherosclerosis weighs heavily in favor of early recognition of the symptoms of carotid vascular disease, prompt evaluation and surgical therapy in properly selected patients.

The authors are from the Department of Surgery and Department of Anesthesia, St. Luke's Hospital and St. Luke's Hospital Foundation for Medical Education and Research. In addition, Dr. Pinkerton is Clinical Associate Professor of Surgery, University of Missouri School of Medicine.

TABLE I

Neurologic Morbidity	*No. Patients*	*Incidence*
Transient	3	3%
Permanent (stroke)	1	1%
Mortality	0	0

heparinization. Light or no preoperative medication was used. Short-acting barbiturate induction and maintenance with halothane and nitrous oxide were employed for anesthesia. Arterial blood pressure was maintained at a level equal to or slightly higher than the patient's resting blood pressure.

Continuous electroencephalographic monitoring is used routinely now and was employed in the last 70 operations in this series. The Javid shunt was used selectively for cerebral protection during the endarterectomy. Shunt use was based on the angiographic pattern of cerebrovascular disease, the patient's neurologic stability, measurement of the internal carotid artery stump back pressure and electroencephalographic monitoring, all of which appeared to be important considerations. The electroencephalogram has proven to be the most reliable single factor in this experience. Thirty-three patients in this series had a carotid stump pressure above 50 mm/Hg, generally considered a safe level. In three of these patients, electroencephalographic changes occurred at the time of carotid occlusion necessitating the use of the Javid shunt. In 36 patients, the carotid stump pressure was below 50 mm/Hg, suggesting the need for shunt use. Simultaneous continuous electroencephalographic monitoring remained normal during the period of carotid occlusion in 30 of these patients and, consequently, a shunt was not used. Endarterectomy was performed in these 30 patients with no complications.

All patients were observed closely for the first 24 hours in an intensive care setting. Postoperative monitoring included blood pressure, neurologic status and electrocardiographic monitoring. Hypertension was not a problem in this group of patients. Relative hypotension manifested by a drop in systolic blood pressure to a level 15 mm/Hg below resting preoperative blood pressure occurred in 61 patients. Neosynephrine was used in a continuous intravenous infusion to maintain a stable systolic blood pressure at a resting preoperative level.

Morbidity and mortality results are tabulated in Table 1. No deaths occurred during 100 operations. A mild and transient neurologic deficit occurred following three operations and resolved prior to hospital discharge. A permanent neurologic deficit occurred in one patient who awoke from anesthesia with no neurologic deficit but experienced a stroke two hours postoperatively. Immediate reexploration of the artery demonstrated no thrombosis of the artery and suggested embolization from the operative site or an intracerebral accident as the cause.

Seventy-four patients have been seen in recent follow-up which ranges from four to 50 months with an average of 25 months. Eight patients were lost to follow-up from one to 36 months postoperatively. Three patients died of cardiac causes three, six, and ten months postoperatively. Eight of the 85 patients have had one transient ischemic attack in the postoperative follow-up period. In each instance, the episode occurred within the first postoperative month. No patient has had a stroke related to the surgically treated carotid artery in the postoperative follow-up period.

Discussion

The course of untreated patients with transient ischemic attacks or other neurologic symptoms caused by carotid atherosclerosis results in a 25%-30% incidence of stroke over the ensuing five-year period.[2,3] The stroke risk is the greatest in this group of patients in the first few months after the onset of symptoms. More than 65% of patients who experience transient ischemic attacks before a stroke have surgically accessible carotid atherosclerosis.[4]

Carotid endarterectomy has proven to be an effective method of treating atherosclerotic lesions in the cervical carotid artery. This form of therapy is acceptable only when operative mortality and neurologic morbidity rates are kept to a minimum. Recent reports by Toole *et al*[3] and Easton and Sherman[5] contain inordinately high combined stroke-mortality rates in a range greater than 20%, which must be considered as unacceptable results. Appropriate selection of patients and current operative techniques should result in a mortality rate of less than 1% to 2% and a rate of permanent postoperative neurologic deficits of 2% to 3% or less.[6] Results of this type weigh heavily in favor of surgical treatment for symptomatic carotid atherosclerosis in light of the predictable natural history in untreated patients and the lack of available medications with proven therapeutic benefit.

Many factors are involved in the production of acceptable results. Patient evaluation and selection involves the interpretation of symptoms which, though often very clearly related to cerebrovascular disease, may in certain patients be ambiguous. Appropriate use of neurology, cardiology and ophthalmology consultation is extremely important and valuable for these patients. Computerized tomography of the head, brain scan, electroencephalography, ophthalmodynamometry, Doppler periorbital examination and continuous electrocardiographic monitoring are used selectively in the evaluation of patients whose symptoms are not clearly related to cerebrovascular disease.

Cerebrovascular angiography is the cornerstone in the evaluation of patients with symptomatic cerebrovascular disease. Transfemoral retrograde arch aortography with selective catheterization of the brachiocephalic vessels is the preferable approach. Biplane views of the carotid bifurcation are routinely obtained. Special oblique projections are often useful in demonstrating ulcerated atherosclerosis that is not seen on anterior-posterior and lateral views.[7] Complete assessment of the location and extent of cerebrovascular disease is extremely important in selecting patients and planning surgical therapy.

Optimal anesthesia management of carotid endarterectomy is an essential ingredient in the successful management of this group of patients. We have found light preoperative medication, induction with short-acting barbiturate and maintenance with halothane in the normocarbic state to be the best pharmacologic combination. Continuous intra-arterial blood pressure monitoring is used routinely, maintaining the blood pressure at normotensive level.

Carotid endarterectomy necessitates complete occlusion of the common, internal and external carotid arteries. A patient's tolerance for this acute change in cerebral perfusion is dependent on the extent of other associated cerebrovascular disease and the presence of intracranial collaterals, such as the circle of Willis. An internal shunt may be used for maintenance of flow in the occluded carotid artery while the endarterectomy is being performed. The internal shunt presents technical difficulties in some patients, especially those with a very small internal carotid artery or those with atherosclerosis which extends several centimeters distal to the bifurcation. The routine use of the internal shunt also has the inherent risk of injury to the internal carotid artery during insertion and clot formation within the shunt itself. For these reasons, the internal shunt is used selectively. The mean arterial blood pressure in the temporarily occluded internal carotid artery has been measured in most of the patients in this report and is considered by many to be a reliable means of selecting objectively patients who need the internal shunt.[8] The electroencephalogram has been used in the last 70 patients in this report and has proven an even more reliable method of monitoring patients for the need of an internal shunt.

Postoperative care necessitates close observation in an intensive care setting for the first 24 hours. Close observation of changes in the patient's blood pressure are essential. The blood pressure frequently fell below normotensive levels in the patients in this report. This relative hypotension was unrelated to blood loss or cardiac factors and was maintained at normotensive levels with a neosynephrine drip. Other authors have reported severe hypertensive states which required drug therapy in the immediate postoperative period.[9] In addition, the neurologic status and any associated medical problems should be observed closely during this critical period.

Long-term follow-up of patients after carotid endarterectomy reflects a distinct improvement in the stroke risk in this group of patients.[1, 6] The relatively short follow-up period in this report has reflected thus far marked improvement in the preoperative symptoms and no late postoperative strokes. Reports of longer follow-up periods have shown a long-term stroke rate of 5% to 7%.[1, 6] The combined operative morbidity and mortality rates and late stroke rates, therefore, represent a distinct improvement over the 25%-30% incidence of stroke which can be expected in symptomatic patients who remain undetected and untreated.

References

1. DeWeese, J. A., Rob, C. G., Satran, R., Marsh, D. O., Joynt, R. J., Summers, D. and Nichols, C.: Results of Carotid Endarterectomies for Transient Ischemic Attacks — Five Years Later. Ann. Surg. 178:258, 1973.

2. Whisnant, J. P., Matsumoto, N. and Elveback, L. R.: Transient Cerebral Ischemic Attacks in a Community, Rochester, Minnesota, 1955 Through 1969. Mayo Clin. Proc. 48:194, 1973.

3. Toole, J. F., Yuson, C. P., Janeway, R., Johnston, F., Davis, C., Cordell, A. R. and Howard, G.: Transient Ischemic Attacks: A Prospective Study of 225 Patients. Neurology 28:746, 1978.

4. Mohr, J. P., Caplan, L. R., Melski, J. W. *et al*: The Harvard Cooperative Stroke Registry: A Prospective Registry of Patients Hospitalized With Stroke. Neurology 28:754, 1978.

5. Easton, J. D. and Sherman, D. G.: Stroke and Mortality Rate in Carotid Endarterectomy: 228 Consecutive Operations. Stroke 8:565, 1977.

6. Thompson, J. E., Patman, R. D. and Talkington, C. M.: Carotid Surgery for Cerebrovascular Insufficiency. Current Prob. Surg. 15:40, 1978.

7. Davidson, K. C., Pinkerton, J. A. and Weiss, J.: Carotid Atherosclerosis, Diverse Angiographic Patterns and Surgical Considerations. J. Kan. Med. Soc. 78:276, 1977.

8. Hays, R. J., Levinson, S. A. and Wylie, E. J.: Intraoperative Measurement of Carotid Back Pressure as a Guide to Operative Management for Carotid Endarterectomy. Surg. 72:953, 1972.

9. Wylie, E. J. and Ehrenfeld, W. K.: Extracranial Occlusive Cerebrovascular Disease Diagnosis and Management. Philadelphia, Pa., W. B. Saunders Co., 1970.

Reprints: Joe A. Pinkerton, Jr., M.D.
4320 Wornall Rd.
Kansas City, Mo. 64111

ALPHONSE POKLIS, Ph.D. *and*
GEORGE E. GANTNER, M.D., *St. Louis*

Deaths Attributed to Drugs in St. Louis City and County

A Brief Survey, 1977-1978

During the past decade, there has been a growing interest and concern about drug toxicity and other chemical hazards. Death is certainly the finite measure of drug hazards. The Medical Examiners Systems of the city of St. Louis and St. Louis County are responsible for determining the cause and manner of death in any person who dies in circumstances indicating possible accident, suicide, homicide or absence of medical care. Included are all deaths directly caused by drugs and most deaths indirectly caused by drugs.

It is important to distinguish between "drug deaths" and "drug related deaths." The first may be defined as resulting from the drug in an inappropriate quantity causing an intoxication which is the proximate cause of death. The second includes instances in which drugs play a significant role in circumstances surrounding a death but are not the proximate cause of death.

Excluding fatal intoxications due to carbon monoxide, the data presented in this brief survey represent all drug deaths investigated by the toxicology laboratories of the Medical Examiner's Offices of the city of St. Louis and St. Louis County during 1977-1978. The vast majority of these deaths were due to suicide; less than 25 were accidental or received open verdicts. No homicides due to poison were investigated. A total of 112 drug deaths occurred; 56 were in each jurisdiction. Drug-related deaths are not presented in this survey.

Here are the results of a two-year survey of 112 "drug deaths" investigated by the Medical Examiner's Office in St. Louis City and County. The majority occurred in adults with suicidal intent who ingested multiple drugs legally obtained by prescription. Only three deaths resulted from drug abuse. Tricyclic antidepressants replaced barbiturates as the most common causative agents.

Dr. Poklis is Assistant Professor in Toxicology and Director of the Forensic and Environmental Laboratory, St. Louis University School of Medicine. Dr. Gantner is Chief Medical Examiner, St. Louis City and County, and Professor of Forensic and Environmental Pathology, St. Louis University.

Of the 112 drug deaths investigated, only 44 were found to be due to a single toxic agent (Table 1). All drugs listed in Table 1 and all subsequent tables include only the parent compound and not their metabolites detected during analysis. Positive toxicology findings for caffeine and nicotine are not included. Of the deaths due to a single agent, 11 were due to antidepressants, eight to barbiturates and seven to accidental overdoses of ethanol. Only six deaths were due to what may be called "classic poisons," namely, arsenic, cyanide, diazinon (a pesticide), isopropanol and sodium fluoride. Three of the cases listed in Table 1 represent deaths due to drug abuse, i.e., the self-administration of a drug or chemical for the purpose of inducing euphoria.

The vast majority of drug deaths are not due to a single toxicant but to the ingestion of several drugs. The occurrence of various drugs detected in 68 drug deaths due to the ingestion of multiple drugs is presented in Table 1. An example of a multiple drug ingestion is a St. Louis County suicide in which toxic concentrations of the following drugs were detected in blood: acetaminophen, diazepam, doxepin, ethchlorvynol and propoxyphene.

The common analgesic drugs (acetaminophen, phenacetin, salicylate/aspirin) were present in 22 (32%) of the cases of multiple drug ingestion. However, only four drug deaths were attributed to these "over-the-counter" products. In the remaining 18 cases, the analgesics were present in combination with more toxic drugs such as propoxyphene and butalbital.

TABLE 1
DRUG INCIDENCE IN 112 DRUG DEATHS

	Frequency		
Drug	SINGLE AGENT	MULTIPLE AGENTS	*Total Occurrence*
cetaminophen	1	9	10
rsenic	1	0	1
arbiturates (class)	8	17	25
arbromal	0	2	2
hloral hydrate	1	2	3
hlordiazepoxide	0	16	16
hlorpheniramine	0	1	1
hlorpromazine	1	2	3
odeine	0	2	2
yanide	2	0	2
Diazepam	0	17	17
Diazinon	1	0	1
Ethanol	7	25	32
Ethchlorvynol	1	3	4
Flurazepam	0	7	7
Fluorocarbons	1	0	1
lutethimide	0	1	1
Hydromorphone	1	0	1
sopropanol	1	0	1
ethamphetamine	1	0	1
ethapyrilene	0	2	2
ethyl salicylate	1	0	1
ethyprylon	0	1	1
eprobamate	0	4	4
henacetin	0	7	7
henytoin	0	1	1
ropoxyphene	3	16	19
xazepam	0	1	1
uinidine	0	1	1
alicylates	1	14	15
odium fluoride	1	0	1
hioridazine	0	2	2
ranylcypromine	2	0	2
ricyclic antidepressants (class)	9	22	31

The incidence of the most frequently encounered drugs or class of drugs in the 112 investiated drug deaths is presented in Table 2. The enzodiazepines were the most commonly enountered drugs, being present in 35 drug deaths. ndoubtedly, the presence of these drugs is due their widespread use. However, no deaths in is survey were attributed to a benzodiazepine as single toxicant. The benzodiazepines in large oses cause loss of consciousness, but seldom roduce Grade 3 or Grade 4 coma.[1, 2] McCloskey *al* reviewed more than 1,000 drug deaths inolving diazepam and found only one attributed the drug as a single agent.[3] While bendiazepines may produce fatal intoxication, few, if any, cases are well documented or adequately studied.

TABLE 2
INCIDENCE OF THE MOST FREQUENTLY ENCOUNTERED DRUGS OR CLASS OF DRUGS IN DRUG DEATHS

Drug or Class of Drug	*Number of Cases Present*	*% of 112 Drug Deaths*
Barbiturates	25	22
Benzodiazepines	35	31
Ethanol	32	29
Propoxyphene	19	17
Tricyclic antidepressant	31	28
OTC analgesics	25	22

TABLE 3
TRICYCLIC ANTIDEPRESSANTS ENCOUNTERED IN DRUG DEATHS

Drug	*Number of Cases*
Amitriptyline	17
Desipramine	1
Doxepin	6
Imipramine	5
Nortriptyline	2
Total	31

Ethanol was present in 29% of the drug deaths surveyed. Seven deaths were attributed solely to ethanol intoxication and seven to ethanol plus one other toxicant.

Tricyclic antidepressant drugs were a significant finding in 31 (28%) of the cases of drug death. The occurrence of individual tricyclics in these cases is presented in Table 3. The high percentage of tricyclic deaths represents a major change of drug involvement in deaths over the past decade. Previously, barbiturates were the class of drug most often associated with fatal intoxications. In 1970, Coull *et al* called attention to the increasing involvement of tricyclics in fatalities.[4] This trend prompted the Federal Drug Administration, in 1976, to caution practitioners that "acute overdosage (of tricyclics) in any amount must be considered serious and potentially fatal."[5] The cardiotoxicity of tricyclics has been well reviewed and documented.[6-9]

Barbiturates were a significant finding in 25 (22%) of the cases of drug deaths; eight as a single agent, six as a combination in a single dosage form (four Fiorinal®, two Carbital®) and three in combination with ethanol. Fifteen of the deaths were due to short acting barbiturates. Secobarbital-amobarbital mixture (Tuinal®) was the single most common dosage form encountered. The role of barbiturates in drug deaths has been well established since their introduction in medical practice.

Propoxyphene was a significant finding in 19 (17%) of the cases of drug deaths. Finkle *et al*[10] have reviewed more than 1,200 medical examiners' cases involving propoxyphene from 1972 to 1975. They have concluded that the number of deaths involving propoxyphene is increasing annually at a faster rate than total drug deaths. The toxicity of propoxyphene and its involvement in fatal intoxications has been well documented.[11-13] The minimum lethal dose of the drug in human beings has been estimated to be as low as 500 mg to 800 mg.[14] This corresponds to between seven to 12 doses of 65 mg each. In this survey, only three of the 19 deaths were due solely to propoxyphene. Ten of the deaths or more than 50%, involved coingestion of ethanol.

CONCLUSIONS

The vast majority of drug deaths occurred in adults who ingested multiple drugs with suicidal intent. In this two year survey, seven deaths were due to accidental overdose of ethanol, four to "over-the-counter" products, six to "classic poisons" and only three to drug abuse. The remaining 92 deaths (82%) resulted from ingestion of legally obtained prescription drugs. Benzodiazepines, barbiturates, ethanol, propoxyphene and tricyclic antidepressants are the most common agents encountered. During the two years of this survey, tricyclics replaced barbiturates as the most common causative agents of fatal intoxications.

REFERENCES

1. Shader, R. I., Greenblatt, D. J., Salzman, C. *et al:* Benzodiazepines: Safety and Toxicity. Dis. Nerv. Sys. 36:23-26, 1975.

2. Greenblatt, J. D., Allen, M. D., Noel, B. J. *et al:* Acute Overdosage With Benzodiazepine Derivatives. Clin. Pharmacol. Ther. 21:497-514, 1977.

3. McCloskey, K. L., Finkle, B. S. and Flavio Midio, A.: An Assessment of the Significance of Diazepam in Postmortem Toxicology. Presented at the 29th Annual Meeting of the American Academy of Forensic Sciences, San Diego, California, Feb. 19, 1977.

4. Coull, D., Crooks, J , Dingwall-Fordyce, S. A. *et al:* Amitriptyline and Cardiac Disease. Lancet 1:590, 1970.

5. Psychopharmacological Agents Advisory Commission, Bureau of Drugs, FDA, Open Session, Feb. 5-6, 1976.

6. Goel, K. and Shanks, R.: Amitriptyline and Imipramine Poisoning in Children. Brit. Med. J. 1:261, 1974.

7. Jefferson, J. W.: A Review of the Cardiovascular Effects and Toxicity of Tricyclic Antidepressants. Psychosomatic Med. 37:160-179, 1975.

8. Norheim, G.: Distribution of Amitriptyline and Nortriptyline in Fatal Amitriptyline Intoxications With Different Survival Times. Foren. Sci. 4:187-190, 1974.

9. Rose, J. B.: Tricyclic Antidepressant Toxicity. Clin. Toxicol. 11:391-402, 1977.

10. Finkle, B. S., McCloskey, K. L., Kiplinger, G. F. *et al:* A National Assessment of Propoxyphene in Postmortem Medicolegal Investigation, 1972-1975. J. Foren. Sci. 21:706-742, 1976.

11. McBay, A. J.: Propoxyphene and Norpropoxyphene Concentrations in Blood and Tissues in Cases of Fatal Overdose. Clin. Chem. 22:1319-1321, 1976.

12. Baselt, R. C., Wright, J. A., Turner, J. E. *et al:* Propoxyphene and Norpropoxyphene Tissue Concentrations in Fatalities Associated With Propoxyphene Hydrochloride and Propoxyphene Napsylate. Arch. Toxicol. 34:145-152, 1975.

13. Caplan, Y. H., Thompson, B. C. and Fisher, R. S.: Propoxyphene Fatalities: Blood and Tissue Concentrations of Propoxyphene and Norpropoxyphene and a Study of 115 Medical Examiners Cases. J. Anal. Toxicol. 1:27-35, 1977.

14. Sturner, W. Q. and Garriott, J. C.: Deaths Involving Propoxyphene, A Study of 41 Cases Over a Two-Year Period. JAMA 223:1125-1130, 1973.

Reprints: Division of Forensic and
Environmental Pathology
Suite 203-4
St. Louis University School of Medicine
1402 S. Grand Blvd.
St. Louis, MO 63104

A 17-minute orientation film to acquaint physicians and third-party payors and carriers with the AMA's *Current Procedural Terminology* (CPT-4) has been prepared through a grant from the Control Data Corp. The film is intended for showing to physician members and interested audiences by state, county, and specialty medical societies. The CPT-4 film is available at no charge on a loan basis. Brochures describing the book are provided with the film for distribution to the viewing audience. For information on obtaining the film, write Department of Applied Medical Systems, AMA Headquarters.

DENNIS R. BRIGHTWELL, M.D., AHMED D. FAHEEM, M.D.,
JAN L. CAMPBELL, M.D. *and* J. GREGORY NEAL, M.D., *Columbia*

Commitment of the Mentally Ill in Missouri

Several important developments have resulted in changes in mental health commitment laws throughout the United States. On Jan. 2, 1979, a new law relating to civil commitment of the mentally ill became effective in Missouri. An amendment became effective on July 31. The new law includes significant changes designed to protect the civil rights of the patient and will result in substantial changes in the procedures for commitment of mental patients in the state.

Dr. Brightwell is Chief, Psychiatry Service; Dr. Faheem is Chief, General Psychiatry Section; and Drs. Campbell and Neal are Resident Physicians, Psychiatry Service, Harry S. Truman Memorial Veterans Hospital. Dr. Brightwell also is Associate Professor of Psychiatry and Dr. Faheem is Assistant Professor of Psychiatry at the University of Missouri-Columbia School of Medicine.

A LAW ESTABLISHING NEW PROCEDURES for civil commitment of mentally ill individuals became effective in Missouri on Jan. 2, 1979 and was amended on July 31, 1979. Under the law, great care is being taken to protect the civil rights of the patient. He cannot be hospitalized against his will unless specific conditions are met.

The law provides for emergency admission, evaluation, treatment and detention which must not exceed 96 hours, excluding weekends and judicial holidays. It also provides for 14-, 90- and 365-day commitments. The nonpsychiatrist will usually be involved only with the provisions for emergency detention. Longer hospitalizations require an evaluation by a psychiatrist, psychologist, psychiatric nurse or psychiatric social worker.

Help is available for the physician who has a question on proper commitment procedure. The law establishes the position of Mental Health Coordinator. This person must be either a psychiatrist, psychologist, psychiatric nurse or psychiatric social worker and be familiar with the laws relating to hospitalization and commitment of the mentally ill. This person will be appointed by the Director of the Department of Mental Health of the state of Missouri. Thirteen mental health coordinators will cover the state. The name of the individual serving a particular region can be obtained from the Director of the Department of Mental Health.

To be detained for 96 hours, only the following two conditions must be met:

1. The patient must be mentally disordered. A mental disorder in the law is defined as any organic, mental or emotional impairment, including those caused by alcoholism or drug abuse, which has a substantial adverse effect on a person's cognitive, volitional or emotional function.

2. The person must also present an imminent likelihood of causing serious physical harm. There must be a substantial risk that physical harm will be inflicted by the patient upon himself as evidenced by recent attempts or threats to do so or by the failure or inability to provide his essential human needs. If the above does not apply, there must be a substantial risk that physical harm will be inflicted upon someone else, evidenced by recent overt acts or behavior which have caused such harm or which place another person in reasonable fear of being harmed. The patient need not have a diagnosable mental illness. However, this is required for longer hospitalizations.

Any licensed physician may participate in the emergency detention procedure. There are three situations in which the physician may be called upon to act: (1) A mentally ill individual who refuses admission, (2) a physician being asked for advice from relatives or neighbors of an individual whom these people believe to be mentally disordered and (3) a patient who has been voluntarily hospitalized but is now demanding his release.

THE PATIENT IN THE EMERGENCY ROOM

Patients may be brought to the emergency room by either family or peace officers. Admission may be encouraged but, if the patient refuses and the likelihood of serious physical harm appears imminent, the patient may be detained. The

TABLE 1
RIGHTS OF INVOLUNTARY PATIENTS

A copy of the patient's rights shall be provided to all involuntarily detained patients within 24 hours of their arrival.

1. **A court hearing will take place within 96 hours at a date and time specified to decide if the patient should be detained for 14 days.**
2. **The patient may select his own attorney at his own expense or have one provided.**
3. **The patient has a right to communicate with counsel at reasonable times and have assistance in contacting counsel.**
4. **The purpose of the evaluation is to determine whether the patient meets the criteria for commitment and anything said can be used to make this determination and may be used in court.**
5. **The patient can present evidence and cross-examine witnesses at the hearing.**
6. **The patient has a right to refuse all medication except life-saving treatment beginning 24 hours before the hearing.**

Mental Health Coordinator, a psychiatrist, a resident in psychiatry or a physician certified by the Department of Mental Health as experienced in the treatment of mental disorders may file an application for admission and evaluation with the court. A peace officer may also file this application if he has personal knowledge of the situation.

The law does not allow the nonpsychiatrist to hold this patient unless one of these individuals files this application for admission. Most mental health facilities have 24-hour coverage by individuals authorized to file this application. If the Mental Health Coordinator cannot be reached, the nearest mental health facility should be contacted.

When an application is filed with the court, the patient must be given a copy. He also must be given a copy of notice of his rights (Table 1) and the court must be provided with proof that this notice was given to the patient.

THE DISTRAUGHT NEIGHBOR'S CALL

A patient may call his physician for advice about a neighbor or relative who is acting in a manner which frightens the caller. In this situation, any individual familiar with the patient may file an application for admission with the court. However, if the physician believes the likelihood of serious physical harm is imminent, he should advise his patient to call the Mental Health Coordinator immediately. The Coordinator notes the facts of the case and, depending upon the immediacy of the threat of danger, will investigate further or file an application for detention and arrange for the police to bring the neighbor to a mental health facility.

THE PATIENT IN THE HOSPITAL

A hospitalized patient may begin to act in a bizarre fashion and convinces his physician that he might harm himself or someone else if released from the hospital. He may demand his release. If the hospital has been recognized as a mental health facility by the Department of Mental Health, the head of the facility or his designee may file the application for detention with the court and hold this patient for a period not to exceed 96 hours. The Mental Health Coordinator must also be notified immediately. If the hospital is not a mental health facility, the physician should call the Mental Health Coordinator or the nearest such facility.

In the three situations described, an observation period is not to exceed 96 hours. Subsequent steps for treatment in a mental health facility should be carried out only with the assistance of the Mental Health Coordinator.

The Mental Health Coordinator will facilitate the commitment procedures in many ways. His expertise will be helpful in clarifying difficult points as they arise. Furthermore, he is a specific individual to whom the physician can refer all those who request help in obtaining information about commitment procedures.

Of particular interest is the malpractice protection written into the law. When physicians render professional opinions or carry out duties specified in the act, they remain free from personal liability for those actions, provided they were performed in good faith, involve their official duties and were carried out in a manner consistent with good professional practice.

The new law should facilitate cooperation between the legal and medical professions and promote the best interest of the patients, physicians and society.

Acknowledgement: The authors express appreciation to the Hon. Ellen Roper, judge of the Boone County Probate Court, for her assistance in the preparation of this paper.

Reprints: *Dennis R. Brightwell, M.D. (116A)*
Harry S. Truman Memorial Veterans Hospital
800 Stadium Road
Columbia, MO 65201

STEPHEN HAMBURGER, M.D., *Kansas City*

Variability of Clinical Manifestations in Pheochromocytoma

Case Report

HYPERTENSION is an extremely common health problem and is the cause of much cardiovascular morbidity and mortality. Although the cause of hypertension is unknown in the majority of cases and, thus, termed "essential," a significant minority of perhaps 10% will be found to have a remedial cause.[1] No secondary cause of hypertension is more important to recognize promptly than pheochromocytoma because corrective surgery may be life-saving and restores the normotensive state in approximately 80% of patients.[2]

A patient with a pheochromocytoma may have a variety of symptoms. One may dramatically present with malignant hypertension with all of its complications. Another patient may seem healthy and show only borderline hypertension. In addition, others have cited paroxysmal symptoms that include palpitations, anxieties, sweating and tremors.[3] Weight loss, weakness and nausea occur in about a third of patients. Additionally, there may seem to be diabetes mellitus with hyperglycemia, glycosuria and occasionally diabetic ketoacidosis.[4] The following case report describes a patient originally thought to have hypoglycemia and later found to harbor a pheochromocytoma which secreted an unusual pattern of catecholamines.

CASE REPORT

The patient was a 55-year-old black man who was admitted to the hospital with a history of paroxysmal anxiety, palpitations, tremors, sweating, nervousness, nausea and weight loss of ten pounds over a period of several months. There were no symptoms of diabetes mellitus and no past history of hypertension or metabolic abnormality. The blood pressure was 100/60 mm Hg. The pulse rate was 120 and regular. Abdominal examination revealed an epigastric scar secondary o peptic ulcer surgery. Results of the remainder of the physical examination were within normal limits. The blood and urine were not remarkable. A five-hour glucose tolerance test revealed a fasting blood sugar plasma) value of 100 mg/100 ml; one hour, 161 mg%, 2 hour 55 mg%, 3 hour 58 mg%, 4 hour 78 mg%, and 5 hour 101 mg%. A tentative diagnosis of symptomatic hypoglycemia was made. Further questioning revealed that during the glucose tolerance test, the patient was totally asymptomatic and his symptoms were not related to food intake or other specific activities. Subsequently, his blood pressure was found to respond to abdominal pressure by changing from 100/60 mm Hg to 200/125 mm Hg. With this change, his symptoms recurred.

Urinary-free catecholamines, metanephrine and VMA were then found to be two to three times normal with the predominant catecholamine being epinephrine. Urinary excretion of L-dopa was also increased. Surgical exploration revealed a pheochromocytoma in the right adrenal gland, which was excised.

Recovery was uneventful. Although the five hour glucose tolerance test did not significantly change, all preoperative symptoms abated. The postsurgery blood pressure was 120/80 mm Hg and was not altered by compression of the abdomen. Over a period of two months, however, the patient's blood pressure slowly rose to 180/105 mm Hg. Results of studies for residual pheochromocytoma, renal artery stenosis and other causes of secondary hypertension were negative. The patient was then regarded as having essential hypertension and he responded satisfactorily to conventional drug therapy.

Pheochromocytoma is a tumor causing many signs and symptoms. Paroxysmal hypertension is one of more than 80 manifestations attributed to this condition. Most features of pheochromocytomas are due to the release of catecholamines from the tumor. This report describes a patient whose condition was initially diagnosed as symptomatic hypoglycemia. Further evaluation revealed a pheochromocytoma which secreted an atypical pattern of catecholamines. The unusual aspects of this case include the hypoglycemia, catecholamine secretion and the relatively low initial basal blood pressure.

Dr. Hamburger is Assistant Professor of Medicine, University of Missouri-Kansas City School of Medicine.

DISCUSSION

The patient had three unusual manifestations: (1) symptoms attributable to hypoglycemia with an "abnormal" glucose tolerance test, (2) catecholamine, predominantly epinephrine and L-dopa hypersecretion and (3) relatively low initial blood pressure with delayed postsurgical hypertension.

Hypoglycemia has recently received much publicity and, consequently, many symptoms are now attributed to so-called low blood sugar. "Non hypoglycemic" hypoglycemia has become a major problem.[5] As a consequence, the medical profession has been asked to develop more rigid criteria as to what constitutes true hypoglycemia. Diagnosis of symptomatic hypoglycemia in this patient was secondary to the plasma sugar value being 55 mg/100 ml at two hours in the five-hour glucose tolerance test. The diagnosis was probably unwarranted.

A recent editorial by Cahill and Soeldner showed that approximately 20% of the normal population will have a blood glucose value below 50 mg/dl during a glucose tolerance test if samples are drawn hourly between two and five hours.[6] Similar findings were reported by Hofeldt.[7] In a recent review article on postprandial hypoglycemia, Permutt states "that a plasma glucose of less than 55 mg/dl during an oral glucose tolerance test is observed in up to 25% of asymptomatic normals when one-half hour samples are obtained. A plasma glucose of less than 50 mg/dl (whole blood glucose of less than 45 mg/dl), however, occurs in less than 10% of the population and is associated with symptoms of hypoglycemia in the majority of cases.[8] The key words are 'associated with symptoms of hypoglycemia.'"

Strict criteria have been advocated for the diagnosis of postprandial hypoglycemia and these stress the association of symptoms of hypoglycemia with the nadir in the blood glucose level.[9, 10] In this patient, it was clearly established that his symptoms were not related to food intake and that he was asymptomatic during the glucose tolerance test. In a study by Wiznitzer *et al*, chemical hypoglycemia was found in 14 of 17 patients with vagotomy and pyloroplasty, but symptoms of hypoglycemia occurred in only six of these.[11] It is probable that the patient herein presented had this type of glucose tolerance test secondary to his previous surgery for peptic ulcer disease.

The main symptoms and signs of pheochromocytoma are related to the secretion of free catecholamines by the tumor. Most pheochromocytomas produce norepinephrine alone or mixed with smaller quantities of epinephrine. There have been only a few case reports of patients with pheochromocytoma who secreted L-dopa.[12, 13] Norepinephrine has predominantly alpha-adrenergic activity while epinephrine has both alpha and beta receptor activity. Depending on which receptor activity is predominant, the presenting symptoms of a patient with a pheochromocytoma may include hypertension, palpitations, various hypermetabolic symptoms and, paradoxically, hypotension. In a series of patients with predominantly epinephrine secreting pheochromocytomas, Page *et al* found that symptoms were mainly paroxysmal and included excessive sweating, palpitations, nausea, nervousness and relative hypotension with paroxysmal hypertension. As with the large majority of other predominantly epinephrine secreting pheochromocytomas, the tumor was located in the adrenal. The patient described herein fits well into the clinical pattern of an epinephrine-secreting pheochromocytoma.

Although not clinically hypotensive, the patient's initial basal blood pressure was 100/60 mm Hg. This pressure is relatively low for a 55-year-old black American man and may possibly be explained by the catecholamine excretion pattern. Epinephrine has both alpha and beta receptor activity and, as was seen in the series of patients studied by Page *et al*, those with epinephrine-secreting pheochromocytomas commonly exhibited hypotension.[14] The two patients studied by Louis *et al* secreted L-dopa from their tumor were normotensive.[12]

The biochemistry of L-dopa might explain this finding. The amino acid dopa has been shown to produce hypotension in man.[15] L-dopa crosses the blood brain barrier where it is decarboxylated to dopamine and norepinephrine and there is evidence that the hypotensive action of L-dopa is related to the accumulation of these two amines in the central nervous system.[15] Additionally, the metabolites of L-dopa also possess hypotensive properties.

Thus, this patient's blood pressure is possibly explained by his uncommon catecholamine secretion pattern. The question remains as to why the patient's blood pressure returned to a hypertensive level after surgery. Although devoid of proof, it may be postulated that this patient was actually hypertensive prior to development of his pheochromocytoma, and the hypotensive properties of the catecholamines decreased his blood pressure to the values recorded on presentation. After the surgical ablation of his tumor, however, and the return to a more normal pattern of catecholamine secretion, the patient once again became hypertensive.

SUMMARY

A pheochromocytoma is a tumor which can cause many signs and symptoms. Pheochromocytosis is a disease which must be included in the differential diagnosis of such diverse illnesses as thyrotoxicosis, diabetes mellitus and toxemia of pregnancy.[16] This report describes a patient with pheochromocytoma who was initially thought to have symptomatic hypoglycemia.

Another valuable lesson from this experience is that all patients are not cured of their hypertension by surgical removal of the tumor and for this reason continued medical surveillance is necessary.

REFERENCES

1. Kaufman, J. J. *et al:* Hypertension — Primary and Secondary. Ann. Int. Med. 75:761, 1971.

2. Deharue, N. C., Morrow, J. D. *et al:* Pheochromocytoma in the Modern Text. Can. J. Surg. 21:387, 1978.

3. Manger, W. M. and Gifford, R. W.: Current Concepts on Pheochromocytoma. Cardiovas. Med. 1:289, 1978.

4. Spergel, G., Bleicher, S. J. and Ertel, N. H.: Carbohydrate and Fat Metabolism in Patients With Pheochromocytoma. N. Eng. J. Med. 278:803, 1968.

5. Yager, J. and Young, R. T.: Non-Hypoglycemia Is an Epidemic Condition. N. Eng. J. Med. 291:907, 1974.

6. Cahill, G. F., Jr. and Soeldner, J. S.: A Non-Editorial on Non-Hypoglycemia. N. Eng. J. Med. 291:905, 1974.

7. Hofeldt, F. D., Adler, R. A. *et al:* Post-Prandial Hypoglycemia. Fact or Fiction. JAMA 233:1309, 1975.

8. Permutt, M. A.: Post-Prandial Hypoglycemia. Diabetes 25:719, 1976.

9. Special Commentary: Statement on Hypoglycemia. Arch. Intern. Med. 131:591, 1973.

10. Hofeldt, F. D.: Reactive Hypoglycemia. Metabolism. 24:1193, 1975.

11. Wiznitzer, T., Shapira, N. *et al:* Late Hypoglycemia in Patients Following Vagotomy and Pyloroplasty. Int. Surg. 59:229, 1974.

12. Louis, W. J., Doyle, A. E. *et al:* Secretion of Dopa in Pheochromocytoma. Br. Med. J. 4:325, 1972.

13. Weil-Malherbe, H.: Pheochromocytoma Catechols in Urine and Tumor Tissue. Lancet 282, 1956.

14. Page, L. B., Raker, J. W. *et al:* Pheochromocytoma With Predominant Epinephrine Secretion. Am. J. Med. 47:648, 1969.

15. Natanabe, A. M., Chase, T. N. *et al:* Effect of L-Dopa Alone and in Combination With an Extracerebral Decarboxylase Inhibition on Blood Pressure and Some Cardiovascular Reflexes. Clin. Pharm. Ther. 11:740, 1970.

16. Hamburger, S.: Approach to the Diagnosis and Management of Pheochromocytoma. JAMWA 33:331, 1978.

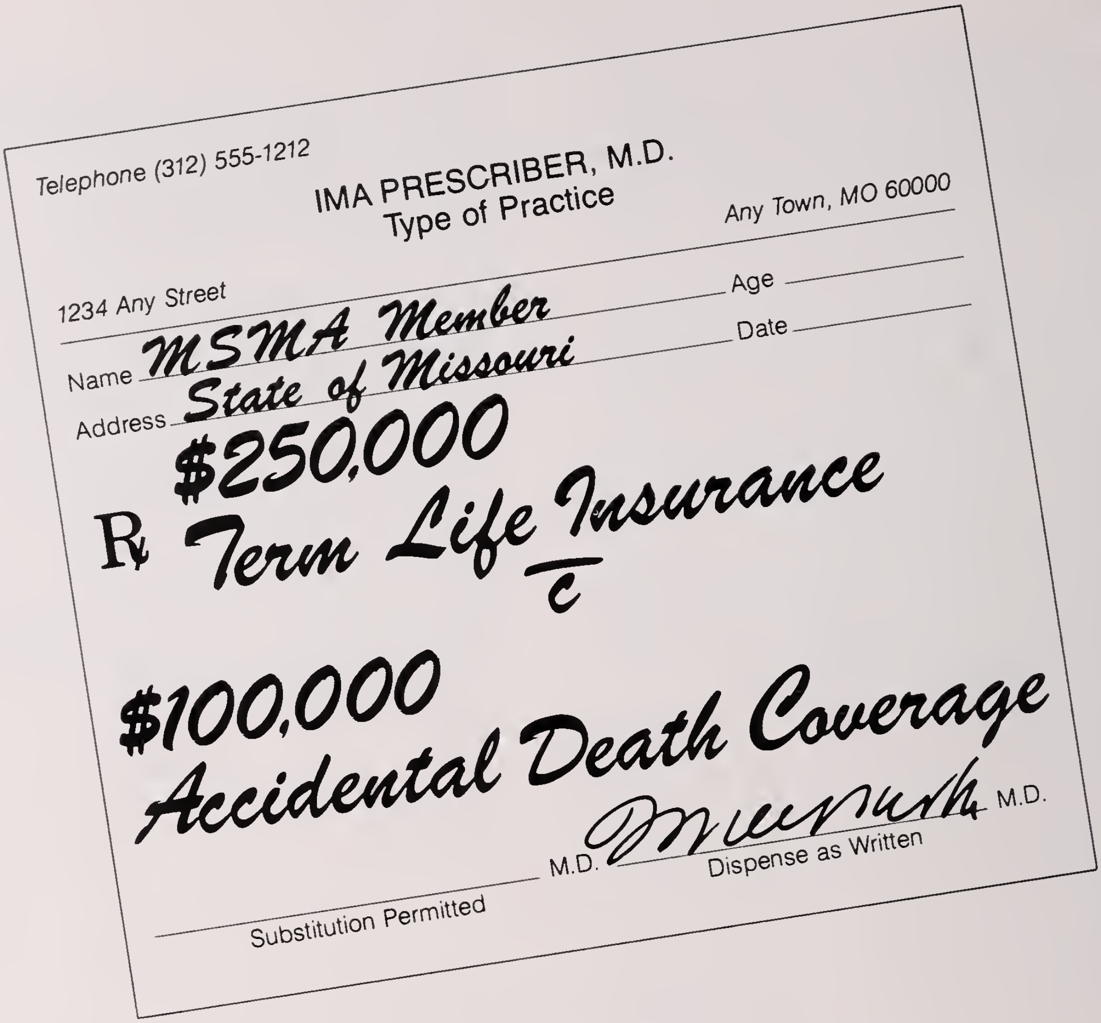
33rd AMA Winter Scientific Meeting

The 33rd Winter Scientific Meeting of the American Medical Association will be held on Jan. 12-15, 1980 in San Antonio.

The scientific program for the meeting is published in the October 26 *Journal of the American Medical Association.* It will include 45 postgraduate courses, 20 symposia, Video Clinics, cardiopulmonary resuscitation courses, scientific exhibits and other special programs.

Many major specialty societies will be involved in the design of the continuing medical education courses and symposia to be offered during the four-day session. They are the American Academy of Dermatology, American Association for Thoracic Surgery, American Association of Neurological Surgeons and the Congress of Neurological Surgeons, American College of Cardiology, American College of Chest Physicians, American College of Physicians, American Society for Clinical Pharmacology and Therapeutics, College of American Pathologists and the AMA Section Council on Plastic, Reconstruction and Maxillofacial Surgery.

Further information is available from the Department of Scientific Assembly, American Medical Association, 535 N. Dearborn, Chicago, IL 60610.



Telephone (312) 555-1212
IMA PRESCRIBER, M.D.
Type of Practice
Any Town, MO 60000
1234 Any Street
Age
Name MSMA Member
Date
Address State of Missouri

$250,000
℞ Term Life Insurance
$\bar{c}$
$100,000
Accidental Death Coverage

M.D.
M.D.
Dispense as Written
Substitution Permitted

Underwritten by:
The Mutual Life Insurance Company of New York
New York, New York

The cure you can trust. . .to make sure your life insurance program keeps pace with your ever-increasing financial obligations. Sponsored by the Missouri State Medical Association and designed specifically to meet the needs of its members.

For further information about this low-cost group plan, contact the Insurance Administrator at the address below. Or call this toll-free number:

800-892-7272

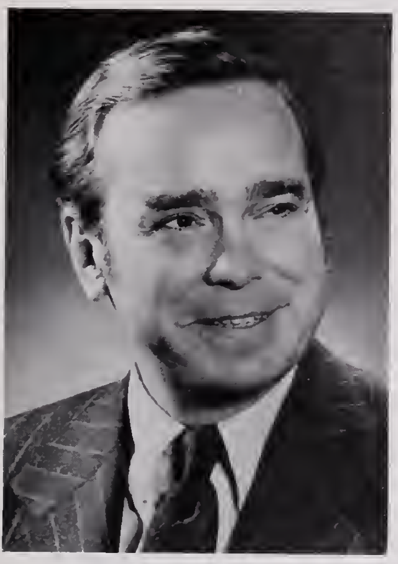
FORREST T. JONES & COMPANY, INC.
3130 Broadway, P.O. Box 131
Kansas City, Missouri 64141

"Professionals Serving Professionals"

President's Message

In early October, I sent a letter to members of Congress from Missouri expressing the opposition of MSMA to the Hospital Cost Containment Act of 1979 (H.R.2626). Responses from four different congressmen suggest varying amounts of understanding of just what the act provides.

Congressman Robert A. Young from the St. Louis area supports the voluntary efforts to control health costs and will watch for legislative proposals which further encourage these efforts. He also feels that mandatory wage and price controls on one industry are unfair. Congressman Bill D. Burlison thanked me for expressing an opinion and said that he would keep my views in mind when the legislative measure comes to the floor of the House.


Andrew McCanse, M.D.

Congressman E. Thomas Coleman from Northwest Missouri shares my concern for this piece of legislation. He also believes that the hospital industry has made great strides through its voluntary effort in restraining the growth of hospital costs. He recognizes the hospital industry as being technology-intensive and believes that imposing controls will cut back on technological improvements which, in turn, would prove to be self-defeating.

Congressman Richard A. Gephardt from the St. Louis area gave the most comprehensive response to my letter. His letter said that health care spending had increased by $144 billion in the years 1965 to 1978 and between 1970 and 1978, hospital expenditures rose an estimated 195%, far outstripping the 115% rise in Gross National Product. He further recognizes that the patient has little incentive to contain costs since most hospital and health care bills are paid by third-party private insurance and federal reimbursement programs. Rather, it is the doctor and the hospital staff that decide the type and extent of treatment to be received. He said the administration recognizes this basic premise, but its proposal to contain hospital costs does little to remedy that problem.

Congressman Gephardt goes on to say that the more appropriate and effective approach to the problem of rising health care costs would be to attack the causes rather than the symptoms. He believes the health care industry should be developed into a more competitive market and also believes that this will give greater efficiency since consumers will need to weigh alternatives that reflect their individual weighing of costs and benefits.

Congressman Gephardt would restructure the third-party pay practices to remove bias in favor of unnecessary hospitalization and would encourage instead outpatient treatment. He also believes competition would be enhanced by encouraging businesses to offer alternative health insurance plans as options to income. By giving the employees a greater financial stake in the determination of elective treatment and still providing more comprehensive insurance against catastrophic bills, the rising costs might better be reduced.

Congressman Gephardt also suggests that health care costs might be more equitably distributed as well as discouraged by determining whether those who abuse their health might be required to assume a larger share of the risk of incurring hospital costs.

Nowhere in Congressman Gephardt's letter does he mention health maintenance organizations although the HMO is suggested by the outpatient care emphasis. As a member of the Ways and Means Committee and the Budget Committee of the House of Representatives, Congressman Gephardt conveys an understanding of the problem of health care costs which is far more comprehensive than might be expected in a public servant.

I hope that many MSMA members will take the time to let their representatives know their views on this bill.

Business
Overhead
Expense
Insurance
Pharmacy
Date

A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

MSMA Auxiliary

Make new friends.
Keep the old.
One is silver,
The other is gold.

AMA Auxiliary Leadership Confluence

The MSMA Auxiliary was invited to send six county presidents-elect to the Confluence in Chicago on October 7-8 along with the state president and president-elect, Mrs. Donald A. Fakhoury.

Presidents-elect who attended were Mrs. Arshad Husain (Boone), Mrs. William L. Fair (Grand River), Mrs. J. Marshall Jung (Cape Girardeau), Mrs. John Hunkeler (Jackson), Mrs. Gary Dyer (Buchanan) and Mrs. Vernon Jackson (Callaway).

The Confluence is a special educational opportunity that provides the presidents-elect with ideas and information about new programs that will be beneficial to them as future presidents and to their respective county auxiliaries. In addition, each discussed a specific confluence subject for members who attended our annual Fall Conference in Columbia on October 17-18.

MSMA Auxiliary Fall Conference

"Informal-Informative" was the theme of our Fall Conference in Columbia planned and produced so expertly by Mrs. Robert M. Thomas, chairman, and members of the Boone County Auxiliary. We sincerely thank them.

My one goal for this meeting was good fellowship and getting to know each other better. I'm confident we all learned from other members who attended.

Mrs. Rudy Ruhling
President

The program was excellent. Guest speakers included Douglas Viehland, MSMA Governmental Relations Director, who gave us a better understanding of HSAs and their activities, and Dr. Leland Pfefer of Columbia, who explained "The Human Potential" and how to "Shape Up For Life" at the annual banquet.

Mrs. Gordon P. Oates of Little Rock, past-president of the Arkansas Medical Society Auxiliary, presented a unique message on gaining new members via her humorous and now-famous "hat skit." Another exciting highlight was the showing of the video tape of the recent Phil Donohue Show on "Medical Marriages" which featured our own Mrs. William M. Walker of Springfield as a panelist.

Sixteen county auxiliaries were represented. Many new friends were made and many old acquaintances were renewed. This togetherness is important to the Auxiliary.

in Brief

A summary of AMA, medical & health news

American Medical Association / 535 North Dearborn Street / Chicago, Illinois 60610 / Phone (312) 527-1500 / TWX 910-221-0300

TESTIFYING BEFORE THE SENATE Subcommittee on Consumer Protection, the AMA urged Congress to bar the Federal Trade Commission from acting against professional associations and professional self-regulation. Representing the AMA, attorney Newton Minow called on Congress to halt "this unintended federal intrusion into decisions which are the legitimate prerogative of the states. Congress didn't intend for the FTC to be able to prevent a voluntary professional association from setting standards of responsible advertising by those who choose to join its ranks," Minow said. The AMA also appeared as a "friend of the court" before the Court of Appeals to protest the FTC's rule requiring unlimited advertising of ophthalmic goods and services. The rule, handed down more than a year ago, is being challenged by the American Optometric Assn. and nine states whose regulations would be overturned by the rule.

AMA AREA MEETINGS will not be held in 1980. The Board of Trustees voted to end the meetings, which began in 1978, as a means of bringing current issues before the Federation leadership, but to continue to provide an informal forum for AMA officials and local leaders through the Official Family Briefing Program. Official Family Briefings are held during state medical association annual meetings at state association request. Attendance at the Area Meetings declined this year, largely because of duplication with Official Family Briefings.

THE REPORT OF THE AD HOC COMMITTEE on the Principles of Medical Ethics, containing a revision of the principles, has been distributed to state, county and specialty medical societies for review by their policy making bodies. The AMA House of Delegates called on the ad hoc committee to consider revision of the report after review by the Federation and to present a progress report at the 1979 Interim Meeting and a final report at the 1980 Annual Meeting.

NOVEMBER 15 IS THE CUTOFF DATE for medical societies to enter physician-speakers in the 1979 AMA Medical Speakers Awards Program. Speakers must have officially represented the society. First-, second- and third-place cash awards will be given in seven categories of speeches made at any time between January 1 and November 15. The cash awards are given to the medical societies to aid their speaker's bureaus. Winning speakers will receive plaques. For more information on the awards program or on AMA consultation or training services for speakers bureaus, contact the Department of Speakers and Leadership programs, AMA Headquarters.

THE AMA IS EXPLORING ways in which it can help in the government's effort to relocate Indochinese "boat people" in the U.S. At the 1979 Annual Meeting, the House of Delegates called for a program, if feasible, to respond to the medical emergencies of the increasing number of refugees. The AMA recently rejoined the National Council for International Health which is based in Washington, D.C., and brought up the subject of refugee aid at the NCIH meeting in September. For more information, contact the Department of International Medicine, AMA Headquarters.

THE NEW AMA COMMITTEE on Accreditation of Continuing Medical Education has been established and the charter approved by the Board of Trustees. The committee will recommend and review standards for CME-sponsoring organizations and will accredit national CME-sponsoring organizations in accordance with those standards. At their annual meeting in July, the AMA House of Delegates voted to withdraw the Association from the Liaison Committee on Continuing Medical Education because of problems described as "monumental." Continuing medical education accreditation was conducted by the AMA for more than a decade before LCCME took over in 1977.

2 ml. = 300 mg.
Tagamet
(cimetidine HCl)
300 mg.
cimetidine/2ml.
Tagamet HCl Injection
brand of
cimetidine
hydrochloride
2 ml.
SK&F LAB CO.
Tagamet
brand of
cimetidine
Tablets
100 tablets
NDC 0108-5013-20
SKF
T13

Tagamet®

brand of
cimetidine

How Supplied:
Pale green 300 mg. tablets
in bottles of 100 and Single Unit Packages of 100
(intended for institutional use only).
Injection, 300 mg./2 ml.,
in single-dose vials
and in 8 ml. multiple-dose vials,
both in packages of 10.

SK&F LAB CO.
a SmithKline company

When painful spasm
is the presenting
symptom...

.in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity
with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.

Pylorospasm has
almost totally blocked
passage of barium
meal.

Barium meal beginning
to pass 10 minutes
after intramuscular
injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-4420 (Y736A) MNR-804

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS
Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy Use with caution in patients with. Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia, increased ocular tension, loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia, nausea; vomiting; impotence, suppression of lactation; constipation; bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg capsule and syrup: *Adults*: 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children*: 1 capsule or teaspoonful syrup three or four times daily. *Infants*: ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg : *Adults*: 1 tablet three or four times daily Bentyl Injection: *Adults*. 2 ml. (20 mg.) every four to six hours intramuscularly only NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc
Cincinnati Ohio 45215 U.S.A

Remember

ZYLOPRIM®

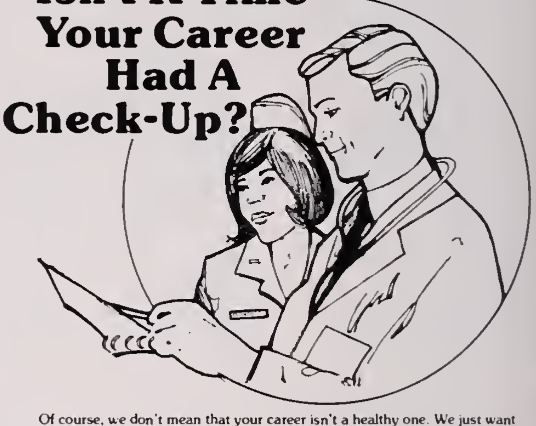
the original (allopurinol)
100 and 300 mg
Scored Tablets

The name Zyloprim is now imprinted on each tablet.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709
ZYLOPRIM
U4A
ZYLO
C9

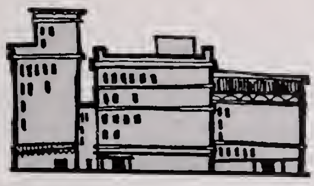
Physicians. Isn't It Time Your Career Had A Check-Up?



Of course, we don't mean that your career isn't a healthy one. We just want to draw your attention to the career opportunities and benefits the Air Force can offer. You'll discover that the Air Force is a challenging and rewarding way of life. Our hospitals and clinics are outstanding. Plus, we'll pay relocation expenses for your family and household goods when you move. If you're interested in our medical career plan, find out all the facts. Sometimes, even a healthy career could use a check-up.

Contact: Capt. Steven DeWoody
(314) 263-0319

Air Force. A great way of life.



NEWS
From the Medical Schools

WASHINGTON UNIVERSITY

John Chirgwin, Ph.D., assistant professor of anatomy, has received a $10,800 grant from the American Diabetes Association.

The funding will enable Dr. Chirgwin to continue his research into the insulin genes of rats and guinea pigs in order to determine those parts of the gene which regulate the amount of insulin synthesized in the cell.

Dr. Chirgwin received his Ph.D. in biochemistry from the University of California in 1974. He has served as a research assistant and postdoctoral fellow and joined the Washington University faculty last year.

Samuel B. Guze, M.D., vice-chancellor for medical affairs, was named chairman-elect of the Board of Directors of the Association for Academic Health Centers (AAHC) at the Association's 21st annual meeting held on October 6.

Dr. Guze will succeed *Robert P. Heaney*, M.D., vice-president of health services at Creighton University, as chairman of the Board of AAHC effective October, 1980. He has been a member of the Association's board of directors since 1976 and a general member since 1971.

The Association is a national health manpower education organization which offers both multidisciplinary and interprofessional direction for developing educational programs for future health care providers. Members include most American and Canadian institutions of higher education with teaching hospitals and programs in medicine as well as in one or more other health-related professions including dentistry, nursing, pharmacy and allied health.

Dr. Guze, a 1945 graduate of Washington University School of Medicine, is the Spencer T. Olin Professor of Psychiatry and chairman of the Department of Psychiatry.

Michael M. Karl, M.D., clinical professor of medicine, has been elected to membership in the Institute of Medicine of the National Academy of Sciences.

Dr. Karl has been on the School of Medicine faculty since 1950 and has been in private practice in internal medicine since 1946.

The Institute of Medicine is responsible for advising the government on public health problems. The membership of the Institute currently numbers 359 and is limited by charter to 400. It is a branch of the National Academy of Sciences which was created in 1863 by an act of Congress signed by President Abraham Lincoln.

UNIVERSITY OF MISSOURI-COLUMBIA

The University has received a $1 million gift for the proposed new library for the medical school and other health sciences.

Dr. J. Otto Lottes, St. Louis, is conveying 3,000 acres of land in Wayne County worth $1 million to the University over a five-year period. The University must raise additional state and private funds to build the proposed $4.6 million facility.

This spring, Dr. Lottes, an orthopedic surgeon, was honored by the Alumni Association and the School of Medicine for his contributions to medicine and, in particular, care of patients with fractures. He is the developer of the Lottes Nail, a pin suitable for setting broken bones.

The proposed 39,000-square-foot facility would have three levels with space for 135,000 volumes and would accommodate 500 readers. The current medical library has 12,000 square feet and accommodates 129 readers.

The Callaway Family Medical Care Clinic in Fulton celebrated its fifth anniversary on October 14.

A satellite program of the Department of Family and Community Medicine, the Callaway County Clinic operates similarly to the University Family Medical Care Center in Columbia.

Dr. Roger Hofmeister, medical director of the clinic, said that the key idea behind the project is to add patient care resources to the community and, at the same time, offer training opportunities to young physicians. He said that 29 family practice physicians have received advanced training at the clinic during the five years of its existence and another 20 residents are now in training.

Dr. Edward H. Adelstein, associate professor of pathology, has been appointed chief of pathology service at the Harry S. Truman Memorial Veterans Hospital. Under a sharing agreement with the University, chemistry and immunology laboratories are located at the VA Hospital and microbiology and blood bank laboratories are in the University Hospital.

Dr. Adelstein is actively involved in cancer research, specifically tumor immunology.

Prof. Frank B. Engley, Jr., Department of Microbiology, recently participated in an infection control workshop sponsored by the Department of Health of the State of California in Asilomar. He presented lectures and held discussions on the role of microbiology in infection control as well as sterilization and disinfection. The meeting was attended by more than 125 infection control nurses from California, Nevada, Oregon, Washington and Alaska.

ST. LOUIS UNIVERSITY

Lindbergh Sata, M.D., Fordyce professor and chairman of the Department of Psychiatry, will serve as chairperson of the program committee for the Second Pacific Congress of Psychiatry to be held in Manila, Philippines on May 12-16, 1980.

The conference, titled "Psychiatry in the Pacific: The Task of Becoming," will bring together some 700 mental health professionals from developing as well as already developed nations for the purpose of communication, scientific exchange and personal interaction.

As an established authority on community mental health issues, Dr. Sata has published numerous articles on the impact of race, culture and life styles on the mental health of minorities. Last June, he participated in the Alaska Judicial Conference in Sitka, Alaska, where he spoke on "Interpreting Cultural Characteristics."

George E. Thoma, M.D., vice-president for the Medical Center, has been named to the board of directors of the Greater St. Louis Health Systems Agency, a federally-funded, private, not for profit agency dealing with regional health planning in regard to cost containment. Dr. Thoma also serves as medical director for the St. Louis Police Department.

The National Cancer Institute of the Department of Health, Education and Welfare has awarded a one-year $549,999 grant to the Medical Center's Institute for Molecular Virology. The grant will aid in the institute's research to determine whether viruses play a role in human cancer.

Maurice Green, Ph.D., director of the Institute and the investigator for this project, has been centering his work on the role of adenoviruses found in tumors. His approach is to extract certain nucleic acids found in all living cells from human cancer specimens and test them for viral "transforming genes." These nucleic acids, either deoxyribonucleic (DNA) or ribonucleic (RNA), have been extracted from approximately 800 cancers.

Investigators at the institute have grouped 31 human adenoviruses in five DNA groups and have screened about 1,000 cancer DNAs for viral sequence. However, these specimens represent only 34% to 56% of the cancer incidence.

The remaining cancers, including breast cancer and cancer of the genital system, must be analyzed before the role of these viruses in most human cancers can be evaluated.

Max Pepper, M.D., M.P.H., professor and chairman of the Department of Community Medicine, has been elected to the Governing Council of the Medical Care Section of the American Public Health Association. The association is the largest professional organization in the world that deals with teaching and learning, research, services and other matters relating to public health.

Jack Zuckner, M.D., director of the Division of Arthritis at the University Hospitals, is the chief investigator for a $23,000 grant from the National Arthritis Foundation. The University's Arthritis Clinical and Research Center was awarded the grant for the study of new medications and anti-inflammatory agents.

"Defining a pilot's stress limits to G-force, altitude and temperature can mean life or death to a pilot in training or flying combat missions," stated *P. F. Iiampietro*, Ph.D., a United States Air Force spokesman, at a physiological stress conference held at St. Louis University Medical Center.

Annually, the Air Force reviews research they have sponsored with universities and industries to exchange new discoveries on environmental and acceleration physiology. The conference, which alternates between an air force base and a university, was held at St. Louis University this year.

Alexander R. Lind, D.Phil., D.Sc., professor and chairman of the Department of Physiology, presented an abstract of his work on muscle stress and temperature. The study is sponsored by an ongoing grant from the Air Force initiated in 1978.

your help is needed by Missouri's future practicing physicians!

Give now to the

MISSOURI STATE MEDICAL FOUNDATION

The Missouri State Medical Foundation (MSMF) was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

As other loan sources are becoming less available, the Foundation is growing into one of the major sources of loans for aspiring physicians. Send your check today!

SPONSORED BY THE
MISSOURI STATE MEDICAL ASSOCIATION
113 Madison St., Jefferson City, Mo. 65102

For Your Convenience

Use this coupon for your TAX-DEDUCTIBLE CONTRIBUTION to the Missouri State Medical Foundation.

TO: MISSOURI STATE MEDICAL FOUNDATION
P.O. Box 1028, Jefferson City, Mo. 65102

I enclose my donation of $........ for the MSMF STUDENT LOAN FUND.

NAME

ADDRESS

....

....

Make Checks Payable to Missouri State Medical Foundation.

The Missouri State Medical Foundation is classified by the Internal Revenue Service under Section 509(a)(3). Individuals may deduct up to 50% of their adjusted gross income for contributions made to the MSMF.

Continuing Education Coming Events

The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 454-3372
Contact: Doris McCall, Assistant Director

Nov. 29-30	Update in Selected Topics in Medicine (St. Luke's Hospital)
Dec. 6-8	Allergy for the Practicing Physician
(1980) **Jan. 26**	WUMC Alumni Winter Meeting (Ixtapa, Mexico)
Jan 27-Feb. 1	Ob-GYN Conference (Keystone, Colo.)
Feb. 28-29	MKSAP V
March-May	Internal Medicine Board Review (Jewish Hospital of St. Louis)
Mar. 20-21	Rheumatology Conference
Mar. 27-28	Vascular Neurosurgery
Apr. 10-11	Seventh Annual OB-GYN Symposium
Apr. 25-26	Eye Alumni Meeting
May 3-11	Second Annual Current Concepts in Musculoskeletal Radiology and Orthopedics Meeting
May 9-10	Orthopedic Radiology
May 15-16	Neuromuscular Diseases

Kansas City Society of Ophthalmology and Otolaryngology
30306 Gillham Rd., Kansas City 64108
(816) 531-8432
Contact: Ron Cosens, Executive Director

Dec. 6-7	Annual Clinical Meeting (Hilton Plaza Inn)

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 454-2291
Contact: Ronald G. Evens, M.D., Director

City-Wide Radiology Conference

Dec. 10	Hepatobiliary Imaging With ^{99m}Tc-HIDA
(1980) **Jan. 14**	Conference at St. Louis University
Feb. 11	Pediatric Radiology
Mar. 10	CT of the Thorax-Updated
May 12	Parenchymal Liver Disease — Evaluation With Computed Tomography

University of Missouri School of Medicine
Office of Continuing Education
M-233 Medical Center, Columbia 65212
(314) 882-2256
Contact: William D. Bradshaw, M.D.

Nov. 29-Dec. 1	Group Relations in Health Care: A Working Conference on Authority, Responsibility and Organizations in Health Care Delivery Systems (TWA Breech Training Academy, Kansas City)
Nov. 30-Dec. 1	Advances in Trauma (Crown Center Hotel, Kansas City)
(1980) **Feb. 17-21**	Cancer Management of the Clinician of the 80s (Tamarron, Durango, Colo.)
Feb. 28-29	Nutritional Update
Mar. 4	Preceptor's Day
Mar. 5-6	Family Practice Update
Mar. 12-13	Medicine and Religion
Mar. 20-21	Spring Surgery Conference
Mar. 31-Apr. 1	26th Annual Urology Seminar (Crown Center, Kansas City)
Apr. 9-10	Primary Pediatrics for the Primary Physician
Apr. 18-20	Group Relations
May 9-11	Third Annual Missouri Cardiovascular Conference (Tan-Tar-A, Osage Beach)
June 2-3	Sixth International Symposium on Intestinal Microecology
Aug. 10-11	Third Annual Workshop in Soft Tissue Surgery

Ed Bixby Institute for Postgraduate Education
Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4167

Dec. 5	Current Management of Diabetes Mellitus
(1980) **Feb. 6**	Carcinoma of the Breast: Update 1980
Apr. 2	Present Status of Antibiotic Therapy
June 4	Chronic Obstructive Pulmonary Disease
Aug. 6	Rheumatic Heart Disease

Greater Kansas City Radiological Society
Contact: Raymond W. Hartwig, M.D., Dept. of Radiology, Trinity Lutheran Hospital, Kansas City

(1980)	
Jan. 16	Pediatric Radiology (Dinner Meeting, Granada Royale Hometel) 4 PM Lecture (Children's Mercy Hospital)
Feb. 13	Nuclear Medicine (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (University of Kansas Medical Center)
Mar. 12	Abdominal C. T. (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (St. Luke's Hospital)
Apr. 23	Bone Roentgenology (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (University of Kansas Medical Center)

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds

Contact: Erich W. Pollak, M.D., Director of Surgical Education

First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds
Every Tues.	9:00 AM Medicine Staff Conference (Except second Tuesday of each month)

Contact: David S. Sneid, M.D., Director of Medical Education

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
Contact: Alta Bingham

Dec. 6-8	The Heart — 1979 (Alameda Plaza Hotel)
(1980)	
Jan. 20-25	Mid-Winter Traveling Medical Education Course. Kansas City Southwest Clinical Society (Steamboat Springs, Colo.)
Feb. 2-9	Medical Seminar at Sea. Kansas City Southwest Clinical Society (Caribbean Cruise leaving Miami)
Feb. 8-9	The Long Weekend: Update in Electrocardiography, Radiology and Use of the Laboratory (Crown Center Hotel)
Feb. 23-Mar. 1	Late-Winter Traveling Medical Education Course. Kansas City Southwest Clinical Society (Maui, Hawaii)
Mar. 27-29	Perspectives in Medicine (Crown Center Hotel)
Apr. 10-12	Update in Obstetrics and Gynecology (Crown Center Hotel)
May 2-3	The Long Weekend: Office Clinical Care (UMKC School of Medicine)
May 15-16	Surgical Problems, Old and New (Alameda Plaza Hotel)
June 5-6	Symposium on Physical Fitness (Crown Center Hotel)

University of Kansas College of Health Sciences
Division of Continuing Education
Rainbow at Olathe Blvd., Kansas City, Kan. 66103
(913) 588-7130

Nov. 29-Dec. 1	Controversial Problems in Surgery

Prepare For:
- NATIONAL MEDICAL BDS
- VQE
- ECFMG
- FLEX
- DENTAL BDS
- PODIATRY BDS
- NURSING BDS

- Voluminous home study notes on all areas of basic science.
- Teaching tests accompanied by comprehensive teaching tapes to be used at any of our tape centers.
- Materials constantly updated.
- Over 40 years of experience and success in the field of test preparation.

Stanley H. KAPLAN
EDUCATIONAL CENTER

Call
(314) 997-7791
8420 Delmar, Suite 301
University City, Mo. 63124

For Information About Other Centers
Outside NY State Call TOLL FREE
800-223-1782
Centers in More Than 80 Major US Cities
Puerto Rico, Toronto, Canada & Zurich, Switzerland

Component Society News

FIRST DISTRICT

COUNCILOR
RICHARD C. HEDGES, M.D.
NORTH KANSAS CITY

Buchanan County Medical Society

Dr. Marvin I. Dunn, director of the Department of Internal Medicine, Section of Cardiovascular Diseases at the Kansas University Medical Center, was the speaker at the October 3 meeting of the Buchanan County Medical Society. His subject was "Treatment of the Hypertensive Patient."

Thirty-eight St. Joseph and area physicians attended the program which followed a dinner at the Hoof and Horn Steak House.

Dr. Gary A. Dyer, vice-president, presided at the meeting. Dr. James J. McMillen introduced the speaker.

Edward M. Hirsch, executive secretary of the Society, was cited at the meeting as one of the five lay members of the American Medical Association in Missouri. Dr. John N. Martin said the special affiliation was given to Mr. Hirsch for his long service and interest in the medical profession. He has held the post of executive secretary for 32 years and is dean of medical society executives in Missouri.

Robert R. Stuber, M.D., *Secretary*

The advertising in
MISSOURI MEDICINE
keeps you informed
and helps pay the
publishing costs!
When the local
representative calls,
tell him you saw
his company's ad in
your journal.

Librax®
Each capsule contains 5 mg
chlordiazepoxide HCl and 2.5 mg clidinium Br

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.
Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma, prostatic hypertrophy, benign bladder neck obstruction, hypersensitivity to chlordiazepoxide HCl and/or clidinium Br

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl/Roche) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

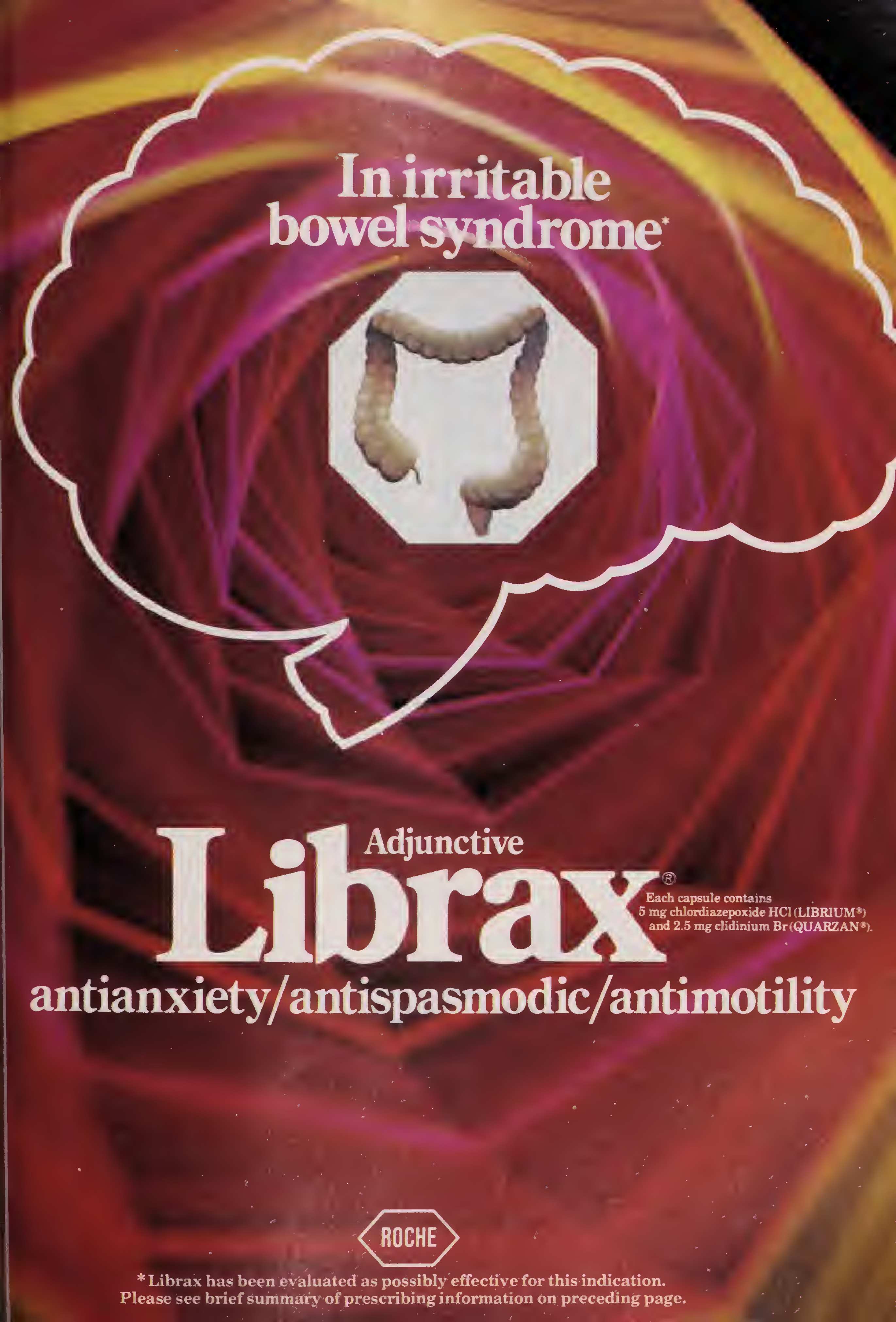
***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated, avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment, blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

ROCHE
Roche Products Inc.
Manati, Puerto Rico 00701


In irritable bowel syndrome*
Adjunctive
Librax®
antianxiety/antispasmodic/antimotility
ROCHE

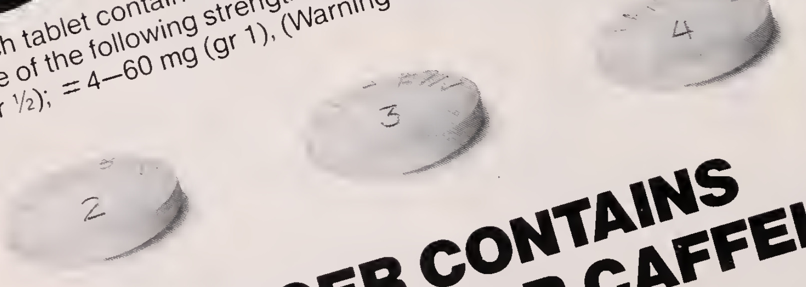
Each capsule contains
5 mg chlordiazepoxide HCl (LIBRIUM®)
and 2.5 mg clidinium Br (QUARZAN®).

*Librax has been evaluated as possibly effective for this indication.
Please see brief summary of prescribing information on preceding page.

~~EMPIRIN®~~
~~COMPOUND~~
~~$\bar{c}$ CODEINE~~
IS NOW

EMPIRIN®
$\bar{c}$ CODEINE Ⓒ III

Each tablet contains: aspirin, 325 mg; plus codeine phosphate in one of the following strengths: #2—15 mg (gr ¼); #3—30 mg (gr ½); #4—60 mg (gr 1), (Warning—may be habit-forming)



NO LONGER CONTAINS PHENACETIN OR CAFFEINE.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

In Memoriam

Randal Weed, M.D., 702 Jules St., St. Joseph 64501; a graduate of Kansas University, 1943; member of Buchanan County Medical Society; age 60; died Aug. 4, 1979.

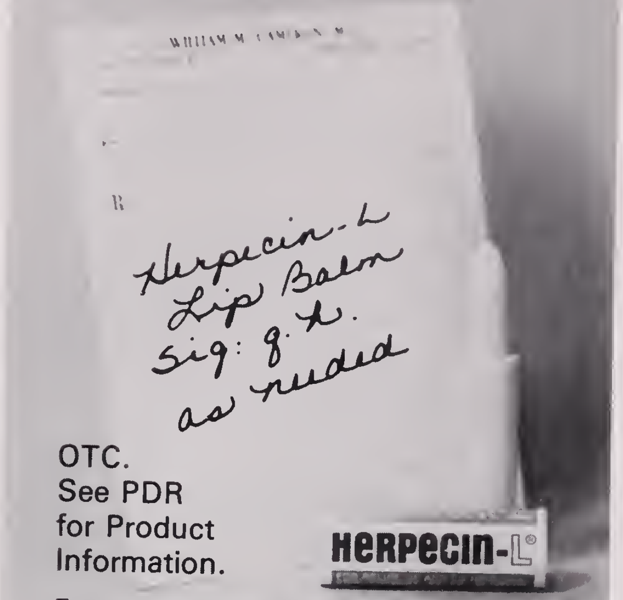
Sam Schneider, M.D., 10394 Oxford Hill, Creve Coeur 63141; a graduate of Washington University, 1936; member of St. Louis Metropolitan Medical Society; age 67; died Aug. 23, 1979.

Irwin Levy, M.D., 6 Pebble Creek Rd., Ladue 63124; a graduate of St. Louis University, 1931; member of St. Louis Metropolitan Medical Society; age 72; died Aug. 28, 1979.

James Chas. Walker, M.D., 609 E. 96th, Kansas City 64131; a graduate of Tulane University, 1913; member of Jackson County Medical Society; age 90; died Sept. 11, 1979.

Harry A. Reich, M.D., 5100 Tamm Ave., St. Louis 63109; a graduate of St. Louis University, 1937; member of St. Louis Metropolitan Medical Society; age 68; died Sept. 22, 1979.

Dx: recurrent
herpes labialis



OTC.
See PDR
for Product
Information.

For samples, write Dept. F at:
CAMPBELL LABORATORIES, INC.
P.O. Box 812, FDR, N.Y., N.Y. 10022
"Herpecin-L" is available at all Medicare and Glaser Drug Stores and other select pharmacies.

★
Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
Since 1899
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Borgmann and Philip E. Mappert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
Suite 202-A, 6600 W. 95th Street, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

New Members

Angela Gail Ayer, M.D., 2601 N. Whittier, St. Louis 63108, has become a member of St. Louis Metropolitan Medical Society. Dr. Ayer is a native of St. Louis, received her preliminary education at Fisk University and her M.D. degree at Meharry Medical College in 1974. She specializes in ophthalmology.

Daniel J. Bauer, M.D., 653 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Bauer is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at St. Louis University in 1977. He specializes in internal medicine.

Linda P. Bock, M.D., 522 N. New Ballas Rd., Suite 206, St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Bock is a native of St. Louis, received her preliminary education at Fontbonne College and her M.D. degree at the University of Missouri in 1974. She specializes in pediatrics.

Joachim R. Brill, M.D., Westowne III, Suite 102, Liberty 64068, has become a member of Clay County Medical Association. Dr. Brill is a native of Berlin, Germany, received his preliminary education at Johannes Gutenberg University and his M.D. degree at the University of Muenster in 1967. He specializes in pediatrics.

Jimmie Ray Crow, M.D., Truman Medical Center, Dept. of Surgery, 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Crow is a native of Columbus, Ohio, received his preliminary education at Wichita State University and his M.D. degree at the University of Kansas in 1978. He specializes in general surgery.

Robert Fischer, M.D., 645 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Fischer is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri in 1977. He specializes in internal medicine.

Harvy Glazer, M.D., Mallinkcrodt Institute of Radiology, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Glazer is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at Washington University in 1976. He specializes in diagnostic radiology.

John E. Goff, M.D., 2601 Cunningham, Joplin 64801, has become a member of Jasper County Medical Society. Dr. Goff is a native of Muskogee, Okla., received his preliminary education at Northeastern State University and his M.D. degree at the University of Oklahoma in 1974. He specializes in family practice.

William R. Hamaker, M.D., 510 Medical Plaza, 4320 Wornall, Kansas City 64111, has become a member of Jackson County Medical Society. Dr. Hamaker is a native of Reading, Pa., received his preliminary education at the University of Delaware and his M.D. degree at Hahnemann Medical College in 1960. He specializes in thoracic and cardiovascular surgery.

Mary L. Heim, M.D., 8600 N.W. 69th, Kansas City 64152, has become a member of Clay County Medical Association. Dr. Heim is a native of Nova Scotia, Canada, received her preliminary education at the University of Missouri and her M.D. degree at the University of Missouri in 1976. She specializes in emergency medicine.

John R. Hertenstein, M.D., Westowne III, Suite 102, Liberty 64068, has become a member of Clay County Medical Association. Dr. Hertenstein is a native of Belleville, Ill., received his preliminary education at the University of Missouri and his M.D. degree at St. Louis University in 1976. He specializes in pediatrics.

Jeffrey Scott Hofer, M.D., St. Johns Mercy Medical Center, 615 S. New Ballas Rd., Creve Coeur 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Hofer is a native of St. Louis, received his preliminary education at Iowa State University and his M.D. degree at the University of Missouri in 1978. He specializes in internal medicine.

Roger P. Jackson, M.D., 340 Professional Bldg. North, 2700 Hospital Dr., Kansas City 64116, has become a member of Clay County Medical Association. Dr. Jackson is a native of Kansas City, received his preliminary education at the University of Kansas and his M.D. degree at the University of Missouri in 1973. He specializes in orthopedic surgery.

Michael Jacobson, M.D., 1734 E. 63rd, Kansas City 64110, has become a member of Jackson County Medical Society. Dr. Jacobson is a native of Dayton, Ohio, received his preliminary education at the University of Michigan and his M.D. degree at Indiana University in 1974. He specializes in nephrology.

Theodore Kitowski, M.D., 2040 Yale, Maplewood 63143, has become a member of St. Louis Metropolitan Medical Society. Dr. Kitowski is a native of Centralia, Ill., received his preliminary education at South Illinois University and his M.D. degree at the University of Illinois in 1976. He specializes in radiology.

Mohan V. Kumar, M.D., 634 N. Grand, St. Louis 63103, has become a member of St. Louis Metropolitan Medical Society. Dr. Kumar is a native of India, received his preliminary education at Mysore Medical College and his M.D. degree at Bangalore Medical College in 1965. He specializes in family practice.

Virgil L. Malmberg, M.D., Dept. of Psychiatry, Barnes Hospital, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Malmberg is a native of Granite City, Ill., received his preliminary education at the University of Illinois and his M.D. degree at the University of Missouri in 1978. He specializes in psychiatry.

Martin B. McClintock, M.D., 14382 Woodlake, Chesterfield 63017, has become a member of St. Louis Metropolitan Medical Society. Dr. McClintock is a native of Lafayette, Ind., received his preliminary education at Northwestern University and his M.D. degree at St. Louis University in 1976. He specializes in family practice.

Urmila J. Mehta, M.D., P. O. Box 295, Liberty 64068, has become a member of Clay County Medical Association. Dr. Mehta is a native of India, received her preliminary education at Bombay University and her M.D. degree at Grant Medical College in 1965. She specializes in anesthesiology.

Frank John Merenda, M.D., 777 S. New Ballas Rd., Creve Coeur 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Merenda is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1969. He specializes in orthopedic surgery.

Carol Ruth Mischnick, M.D., 1035 Bellevue, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Mischnick is a native of Alliance, Neb., received her preliminary education at the University of Nebraska and her M.D. degree at the University of Nebraska in 1972. She specializes in plastic surgery.

Y. Scott Moore, M.D., Western Missouri Mental Health Center, 600 E. 22nd, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Moore is a native of Woodriver, Neb., received his preliminary education at Nebraska Wesleyan University and his M.D. degree at the University of Nebraska in 1957. He specializes in family practice.

Alvaro Mora, M.D., 4956 Mardel Ave., St. Louis 63109, has become a member of St. Louis Metropolitan Medical Society. Dr. Mora is a native of Colombia, S.A., received his preliminary education at Champagnagt Institute and his M.D. degree at Antioquia University in 1969. He specializes in obstetrics and gynecology.

Terry V. Morris, M.D., 1515 W. Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Morris is a native of Chicago, Ill., received his preliminary education at the University of Texas and his M.D. degree at the University of Texas in 1975. He specializes in obstetrics and gynecology.

Scott M. Nordlicht, M.D., Suite 4104 Queeny Tower, Barnes Hospital Plaza, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Nordlicht is a native of New York City, N. Y., received his preliminary education at Columbia University and his M.D. degree at Downstate Medical School in 1973. He specializes in internal medicine.

James F. Piontek, M.D., Box 295, Liberty 64068, has become a member of Clay County Medical Association. Dr. Piontek is a native of Washington (Mo.), received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri in 1974. He specializes in anesthesiology.

Ronald A. Sapiente, M.D., 1325 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Sapiente is a native of New Haven, Conn., received his preliminary education at Sacred Heart University and his M.D. degree at St. Louis University in 1974. He specializes in therapeutic radiology.

Prithvi P. Singh, M.D., 5535 Delmar Blvd., St. Louis 63112, has become a member of St. Louis Metropolitan Medical Society. Dr. Singh is a native of India, received his preliminary education at Khalsa College and his M.D. degree at Government Medical College in 1971. He specializes in internal medicine.

Arturo M. Taca, M.D., 2601 N. Whittier, St. Louis 63113, has become a member of St. Louis Metropolitan Medical Society. Dr. Taca is a native of Manila, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1971. He specializes in urology.

Jerome S. Tannenbaum, M.D., 216 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Tannenbaum is a native of New York, N. Y., received his preliminary education at Vanderbilt University and his M.D. degree at Vanderbilt University in 1976. He specializes in internal medicine.

Robert W. Taylor, Jr., M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Taylor is a native of St. Louis, received his preliminary education at the University of Kansas and his M.D. degree at St. Louis University in 1977. He specializes in internal medicine.

Louis A. Turitto, M.D., 1515 Hazel Ave., Carthage 64836, has become a member of Jasper County Medical Society. Dr. Turitto is a native of Brooklyn, N. Y., received his preliminary education at Syracuse University and his M.D. degree at the University of Bologna in 1968. He specializes in general surgery.

Sittichai Vongsnichakul, M.D., 1755 S. Grand, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Vongsnichakul is a native of Thailand, received his preliminary education at Mahidol University and his M.D. degree at Chulalongkorn University in 1970. He specializes in general surgery.

Robert Alan Yanover, M.D., 2821 Ballas Rd., St. Louis 63131, has become a member of St. Louis Metropolitan Medical Society. Dr. Yanover is a native of New York, N. Y., received his preliminary education at the University of Rochester and his M.D. degree at Washington University in 1973. He specializes in neurology.

WELCH ALLYN WALL UNIT

The new 3.5v. Halogen wall transformer unit with Fiber Optic Pneumatic Otoscope and Opthalmoscope, one of the complete line of WELCH ALLYN diagnostic equipment currently in stock for immediate delivery.

to arrange a demonstration in your office contact your local Goetze-Niemer salesman or call

The GOETZE-NIEMER Co.

1701 Brooklyn, K.C., MO. 816-231-1900
serving the Midwest since 1884

INDEX TO ADVERTISERS

They Help Make MISSOURI MEDICINE *Possible*

Air Force 602
Burroughs Wellcome Co. .... 602, Insert (608-609)
Campbell Laboratories, Inc. 609
Cooper Laboratories 572
Goetz-Niemer Co. 612
Fred S. James & Co. of Missouri, Inc. 598
Forrest T. Jones & Company, Inc. 596
Stanley H. Kaplan Educational Center 607
Eli Lilly & Company 580
Medical Defense Associates, Ltd. 577
Medical Protective Company 609
Merck Sharpe & Dohme .... Insert (576-577)
Merrell-National Laboratories
...... 572, Insert (572-573), Insert (600-601), 601, 602
MOMEDICO 570
Munns Medical Supply 613
Purepac Pharmaceuticals 573
Roche Laboratories 571, 608, Insert (608-609), 615, 616
Saint Louis Blue Shield 576
Smith Kline Diagnostics .... Insert (572-573)
Smith Kline & French .... Insert (600-601)
The Upjohn Company .... Insert (576-577)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

T. LOUIS OFFICE — Fully equipped medical suite deally located off major highway in Clayton area. 1,100 sq. t. completely furnished with all new medical and office quipment. Excellent lab and x-ray in building. Easy parkng. Available July, 1980. Call (314) 863-3755.

ALL 314-636-5744 — For MSMA Impaired Physician Asistance Program. 24-hour answering Service. Calls are conidential.

HLA TESTING — HLA Testing for disease association studies, HLA B-27, HLA B-28, etc. Available from the Midwest Organ Bank Laboratories. For more information, call (816) 931-6353. Midwest Organ Bank Laboratories, 305 W. 43rd Street, Kansas City, Mo. 64111.

PRACTICE FOR SALE — Family practice, three years old. Rapidly growing. Excellent potential. South Kansas City. Leaving for residency. $45,000. Reply to Box CA-454, Missouri State Medical Association, P.O. Box 1028, Jefferson City, Mo. 65102.

ST. LOUIS — EMERGENCY MEDICINE work available Monday-Friday days only; full time or part time; paid professional liability; flexible schedule; Missouri license required. Call PPG's Laury Kamp at 314-878-2280.

IS YOUR PRACTICE FOR SALE? — Most medical practices represent a lifetime investment, yet few are ever sold for their value as a going business. Health Resources provides merger brokerage services to medical practices and hospitals. If you plan to retire or cut back your practice in the next five years, now is the time to plan for a successful sale — when your practice is at its optimum. For more information, call us in confidence: Health Resources, Ltd., River Road Professional Building, Box 12220, Kansas City, Mo. 64152. (816) 587-9020.

MUNNS MEDICAL SUPPLY

9202 Barton   Overland Park, Ks. 66214   913-492-5820

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

Former students of Dr. Evarts A. Graham, St. Louis, honored him on his 20th anniversary as professor of surgery at Washington University School of Medicine on October 11-12. They presented a scientific program prior to a dinner at the Chase Hotel.

The Boone County Medical Society met at the Boone County Hospital in Columbia on September 5 to commemorate the 50th anniversary in the practice of medicine by Dr. F. G. Nifong. It is hoped that the doctor will continue his activity in the Society.

The Perry County Medical Society met at the office of Dr. B. T. Koon of Perryville, president, on September 22 at 8 PM. Three members were present, reports Dr. J. J. Bredall, secretary, the third being Dr. O. A. Carron.

Recently, a man has obtained money from several oculists in Missouri and Iowa by obtaining change on a worthless check and not returning for the glasses. The sheriffs of Nodaway County at Maryville and Grundy County at Trenton wish to be notified of his apprehension.

TWENTY-FIVE YEARS AGO

Our 79 American medical schools are in a financial squeeze that requires an additional $10,000,000 annually to overcome. This has made it necessary for some of the schools to reduce teaching staffs to dangerous levels.

More than 600,000 children have completed three inoculations in the field test of the trial polio vaccine developed by Dr. Jonas Salk of the University of Pittsburgh. The evaluation study is under the direction of Dr. Thomas Francis, Jr., University of Michigan School of Public Health.

Fred Collar, M.D., Springfield, won top honors in the Seventh Annual Greene County Medical Society Handicap Golf Tournament at Hickory Hills Country Club.

After practicing 56 years (54 of them in Putnam County, Mo.), J. H. Holman, M.D. administered to the needs of five generations in one call at one house. In addition to practicing medicine, Dr. Holman is president of the Farmers Bank of Unionville.

For his outstanding work in training black physicians, Robert Elman, M.D. of St. Louis was honored at a testimonial dinner in Washington. He was presented a wrist watch from the "alumni" of Homer G. Phillips Hospital in St. Louis for nearly 16 years of leadership in major scientific achievements.

TEN YEARS AGO

Melvin C. Kasten, M.D., Cape Girardeau, was elected president and Harry S. Still, D.O., was elected secretary of the Missouri Board of Registration for the Healing Arts at the organization's meeting in September. Other members of the Board are James T. Brown, M.D., Springfield; Lee E. Havidson, D.D., Kansas City; Shelby R. Hughes, M.D., Clinton; and R. Jerome Williams, M.D., St. Louis.

About 100 persons attended the September 23 meeting of the Cole County Medical Society at the Ramada Inn in Jefferson City. Guests included MSMA President Doyle C. McCraw and Mrs. McCraw of Bolivar. Two new members and their wives were introduced. They are Dr. and Mrs. Robert J. Hauser and Dr. and Mrs. Norman A. James.

A practicing physician for 51 years, Dr. George F. Cresswell, Potosi, was given "his day" on October 27 by an overflow crowd of friends.

The three-floor addition to the Dunklin County Memorial Hospital will be named in honor of Dr. Paul Baldwin, veteran Kennett physician.

Dr. Russell D. Shelden, Kansas City, has been elected district director of the American Society of Anesthesiologists. He will represent the states of Missouri and Kansas.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older:

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

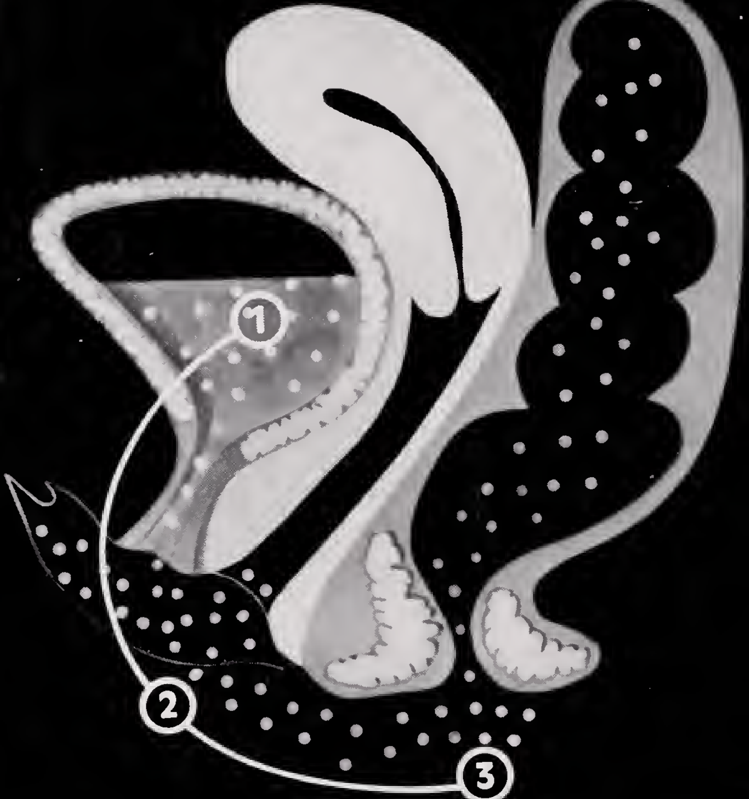
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see back cover.

Her *next* attack of cystitis may require

the Bactrim™ 3-system counterattac

Philadelphia Library
19 South 22nd St.
Philadelphia, PA 19103



ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

ind

Missouri Medicine

Vol. 76, No. 12 (ISSN 0026-6620) December, 1979

Ellis Fischel
State Cancer Hospital
and
Cancer Research Center

Special Issue

MDS

Radiation
Therapy
in
Malignant
Melanoma

Radiation
Therapy
at
EFSCH

Dr. Ellis Fischel

Ellis Fischel
State Cancer
Hospital
After 40 Years

Total
Pelvic
Exenteration
for
Rectal
Cancer

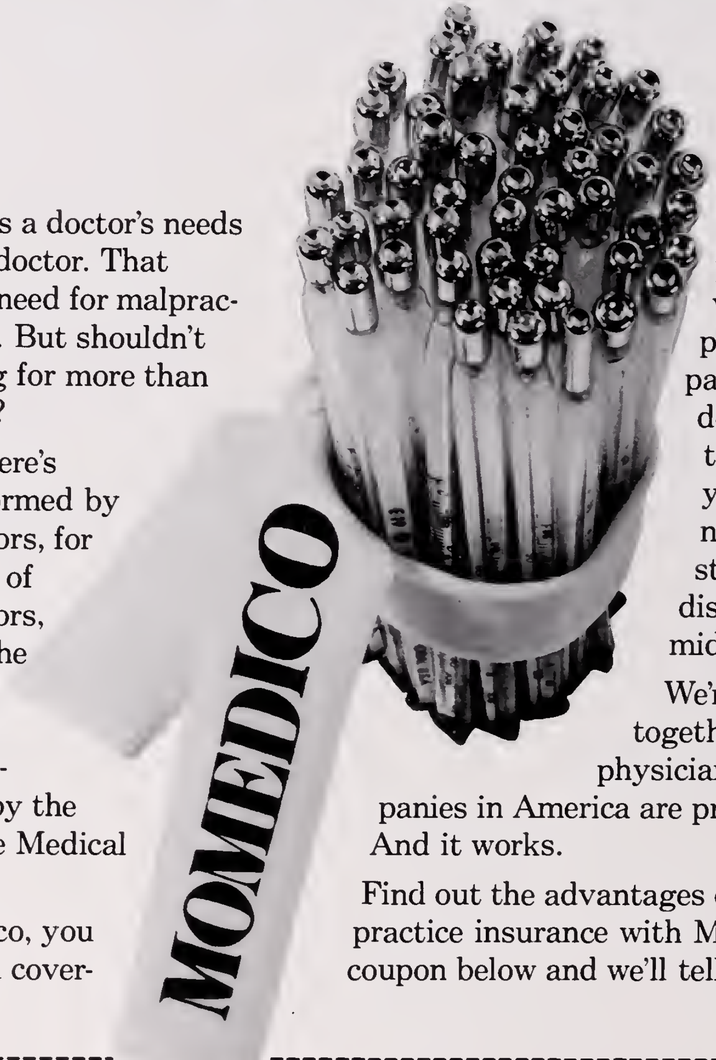
LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

DEC 3 1 1979

MISSOURI STATE MEDICAL ASSOCIATION

Contents • Page 621

In unity there is strength. That's why there's Momedico.



Nobody knows a doctor's needs better than a doctor. That includes your need for malpractice insurance. But shouldn't you be looking for more than just coverage?

That's why there's Momedico. Formed by Missouri doctors, for the protection of Missouri doctors, Momedico is the only professional liability insurance company backed by the Missouri State Medical Association.

With Momedico, you get the needed coverage at a competitive price. You also get a voice in the company's policies. You become part of a doctor-owned, doctor-directed organization that has one goal: your welfare. There are no earnings to retain for stockholders' benefit, no disappearing acts in the middle of a crisis.

We're doctors working together. More than 80,000 physicians in 19 similar companies in America are protected like this. And it works.

Find out the advantages of having your malpractice insurance with Momedico. Just mail the coupon below and we'll tell you the whole story.

☑ Yes. I would like to know more about professional liability insurance with Momedico.
☐ Have your agent call me. (Best time to call__________)
☐ Send me more information, please

MOMEDICO®
Better Protection. Together.
Sponsored by the Missouri State Medical Association.

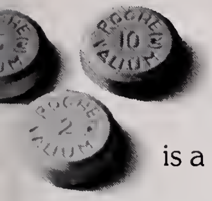
NAME ____

ADDRESS ______________________________________

CITY/RFD ______________________________________

ZIP ____________________ PHONE # ____________________

Mail to: Momedico, 100 North Broadway, St. Louis, MO 63102 or call Collect (314) 241-4774



A character all its own.

Valium (diazepam/Roche) is a benzodiazepine with a character all its own. Pharmacologically, it is a potent skeletal muscle relaxant and anticonvulsant (in adjunctive use), as well as an antianxiety agent. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® Ⓘⓥ

diazepam/Roche

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
DEC 31 1979

Missouri State Medical Association

113 Madison, P.O. Box 1028
Jefferson City, Mo. 65102
Phone (314) 636-5151

OFFICERS

President, Andrew McCanse, M.D., Kansas City
President-Elect, Richard V. Bradley, M.D., St. Louis
Vice-President, Milton B. Ozar, M.D., Kansas City
Vice-President, Mary J. Merideth, M.D., Cassville
Vice-President, C. G. Stauffacher, M.D., Sedalia
Secretary, John I. Matthews, M.D., Jefferson City
Treasurer, Carol F. Williams, M.D., St. Louis
Speaker, Edwin K. Burford, Jr., M.D., Cape Girardeau
Vice-Speaker, Jay L. Meyer, M.D., St. Louis
Immediate Past-President, John N. Martin, M.D., St. Joseph

DELEGATES TO THE AMA

Melvin C. Kasten, M.D., Cape Girardeau
Hugh E. Stephenson, Jr., M.D., Columbia, *Alternate*
Robert A. Slickman, M.D., Kansas City
Rae W. Froelich, M.D., Lebanon
George Bohigian, M.D., St. Louis, *Alternate*
Francis X. Lieb, M.D., St. Louis
Richard P. Bowles, M.D., Liberty, *Alternate*

COUNCILORS

Eugene T. Hansbrough, M.D., Poplar Bluff, *Chairman*
Louis P. Hetlage, M.D., Troy, *Vice-Chairman*

1st District, Richard C. Hedges, North Kansas City
Vice-Councilor, Gary Dyer, M.D., St. Joseph
2nd District, John H. Walterscheid, M.D., Hannibal
Vice-Councilor, Patricio Avila, M.D., Hannibal
3rd District, Thomas J. Cooper, M.D., St. Louis
Richard H. Fallon, M.D., St. Louis
James M. Stokes, M.D., St. Louis
J. Otto Lottes, M.D., St. Louis
Theodore L. Paletta, M.D., St. Louis
Frederick D. Peterson, M.D., St. Louis
Vice-Councilor, Gerard M. Callaghan, M.D., St. Louis
4th District, Paul H. Rother, M.D., St. Charles
Vice-Councilor, William R. Richardson, M.D., Union
5th District, H. Peter Ekern, M.D., Mexico
Vice-Councilor, Mary J. McCaffree, M.D., Jefferson City
6th District, R. John Torontow, M.D., Nevada
Vice-Councilor, A. J. Campbell, M.D., Sedalia
7th District, Irving H. Clark, M.D., Kansas City
Donald McIntosh, M.D., Kansas City
Ronald A. Youmans, M.D., Kansas City
Vice-Councilor, William D. Hoadley, M.D., Kansas City
8th District, Walter A. German, M.D., Springfield
Marvin A. Singleton, M.D., Joplin
Vice-Councilor, Charles J. Ash, M.D., Springfield
9th District, Claude W. Cooper, M.D., Thayer
Vice-Councilor, Jack Wiles, M.D., West Plains
10th District, E. T. Hansbrough, Poplar Bluff
Vice-Councilor, George H. Ladyman, M.D., Poplar Bluff

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in MISSOURI MEDICINE is protected by copyright.

Manuscripts should be submitted to the editor, Wilfred E. Wooldridge, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript.

Manuscripts should be typewritten, double spaced, and the original with one carbon copy submitted. Retain another carbon copy for proofreading. Used manuscripts are not returned. School and hospital appointments of the author should accompany the manuscript. It is desirable that a synopsis-abstract of approximately 135 words accompany the manuscript.

References should be arranged at the end of the article in the order in which the references are cited in the text. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the backs. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

All material other than scientific should be received prior to the first of the month preceding month of publication.

STAFF

Executive Secretary, Royal O. Cooper
Assistant Executive Secretary, C. C. Swarens
Scientific Affairs Director, Ron Ellison
Field Secretary, Don Wilson
Communications Director, Becky Auner Hankins
Director of Government Relations, Douglas G. Viehland
Director of Management Services, Michael R. Porter

Contents for December, 1979

Scientific Articles

Dr. Ellis Fischel; Samuel D. Soule, M.D. 627

Ellis Fischel State Cancer Hospital After 40 Years; Eugene M. Bricker, M.D. 629

Radiation Oncology at Ellis Fischel State Cancer Hospital; C. Eugene Ridenhour, M.D., Narayanagoud Memula, M.D. and Larry L. Doss, M.D. 633

Total Pelvic Exenteration for Rectal Cancer; William D. Johnston, M.D., Eugene M. Bricker, M.D. and Carlos Perez-Mesa, M.D. 638

Radiation Therapy in Malignant Melanoma; Larry L. Doss, M.D. 641

News and Features

MSMA News Round-Up ..... Insert (622-623)

Photo-Comment by James W. Clawson, M.D. 624

Editor's Corner 625

President's Message 645

MSMA Auxiliary 646

Editorials 647

In Memoriam 648

MSMA Members Receive Physician's Recognition Award 649

n Brief 650

News from the Medical Schools 652

Continuing Education Coming Events ... 654

New Members 656

Component Society News 657

ndex to Volume 76 662

ndex to Advertisers 665

Missouri Medicine in Review 666

Missouri Medicine

THE JOURNAL OF THE
MISSOURI STATE MEDICAL ASSOCIATION

Wilfred E. Wooldridge, M.D., *Editor*
James Clawson, M.D., *Contributing Editor-Photographer*
Leo H. Pollock, M.D., *Contributing Editor*
Jean E. Duensing, *Managing Editor*
Royal O. Cooper, *Business Manager*

EDITORIAL BOARD

Dermatology
Philip C. Anderson, M.D., Columbia
Family Practice
William D. Bradshaw, M.D., Columbia
Ben H. Koon, M.D., Kansas City
Hematology
Leo T. Neu, Jr., M.D., Springfield
Internal Medicine
John W. Berry, M.D., St. Louis
Carl G. Kardinal, M.D., Columbia
Robert K. Skillman, M.D., Kansas City
Neurology
J. Donald Easton, M.D., Columbia
Obstetrics/Gynecology
Thomas M. Mier, M.D., St. Louis
Oncology
Michael C. Perry, M.D., Columbia
Ophthalmology
F. Thomas Ott, M.D., St. Louis
Otorhinolaryngology
Bentley A. Nelson, M.D., Kansas City
Pediatrics
Richard D. Blim, M.D., Kansas City
Psychiatry
William F. Clary, M.D., Springfield
Radiation Therapy
MacDonald B. Logie, M.D., St. Louis
Radiology
Wayne A. Simril, M.D., St. Louis
Surgery
General
Charles H. Bentlage, M.D., Joplin
Richard O. Craig, M.D., St. Joseph
Orthopedic
Raymond A. Ritter, Jr., M.D., Cape Girardeau
Urology
Donald J. Mehan, M.D., St. Louis

PUBLICATION COMMITTEE

Wilfred E. Wooldridge, M.D., Springfield, *Chairman*
Ernest Lorenc, M.D., Springfield
William C. Mixson, M.D., Kansas City
Charles S. Sherwin, M.D., St. Louis
Byron M. Stuart, M.D., Boonville

Editorial and Business Office, P.O. Box 1028, 113 Madison St., Jefferson City, Mo. 65102.

Copyright 1979 by Missouri State Medical Association. All rights reserved

Second Class postage paid at Jefferson City, Missouri and at additional mailing offices. MISSOURI MEDICINE (Publication No. 355380) is published monthly, except semimonthly in August, by the Missouri State Medical Association, 113 Madison Street, Jefferson City, Missouri 65102. Subscription Price: $15.00 Per Year; Medical Students, Interns and Residents, $7.50 Per Year. Printed by The Ovid Bell Press, Inc., Fulton, Missouri.

Ellis Fischel State Cancer Hospital

•

Cancer Research Center

40th Anniversary Symposium

MAY 3, 1980

The Ellis Fischel State Cancer Hospital was founded 40 years ago and is dedicated to the treatment of cancer in the citizens of Missouri. Since its organization, the institution also has been involved continuously in teaching and research. Many of the physicians of this state have had part of their training at this institution.

On Saturday, May 3, 1980, the Ellis Fischel State Cancer Hospital and the Cancer Research Center will sponsor a symposium on *Breast Cancer*. This symposium will be presented by distinguished alumni of the Ellis Fischel State Cancer Hospital and the Cancer Research Center:

Lauren Ackerman, M.D. of New York
Juan del Regato, M.D. of Tampa
Reginald Pugh, M.D. of Pittsburgh
William Donegan, M.D. of Milwaukee
Jose Sala, M.D. of New Mexico.

Each of these individuals is a prominent authority in oncology. Many are old acquaintances and former instructors of Missouri physicians.

The Professional Staff at the Ellis Fischel State Cancer Hospital and the Cancer Research Center invites you to come. Social events are being planned for Friday, May 2, 1980.

For further information contact:

Eugene Bricker, M.D.
Chief of Staff
Ellis Fischel State Cancer Hospital
Columbia, MO 65201.

ALDORIL®
ALDORIL®
ALDORIL®
ALDORIL®
containing methyldopa and hydrochlorothiazide

TABLETS
ALDORIL®-25
containing 250 mg ALDOMET® (Methyldopa, MSD)
and 25 mg HydroDIURIL® (Hydrochlorothiazide, MSD)
TABLETS
ALDORIL®-15
containing 250 mg ALDOMET® (Methyldopa, MSD)
and 15 mg HydroDIURIL® (Hydrochlorothiazide, MSD)
TABLETS
ALDORIL® D30
containing 500 mg ALDOMET® (Methyldopa, MSD)
and 30 mg HydroDIURIL® (Hydrochlorothiazide, MSD)
TABLETS
ALDORIL® D50
containing 500 mg ALDOMET® (Methyldopa, MSD)
and 50 mg HydroDIURIL® (Hydrochlorothiazide. MSD)

Merck Sharp & Dohme, Division of
Merck & Co., Inc., West Point; PA 19486

MSD
MERCK
SHARP&
DOHME

Copyright © 1979 by Merck & Co Inc
J9AR13

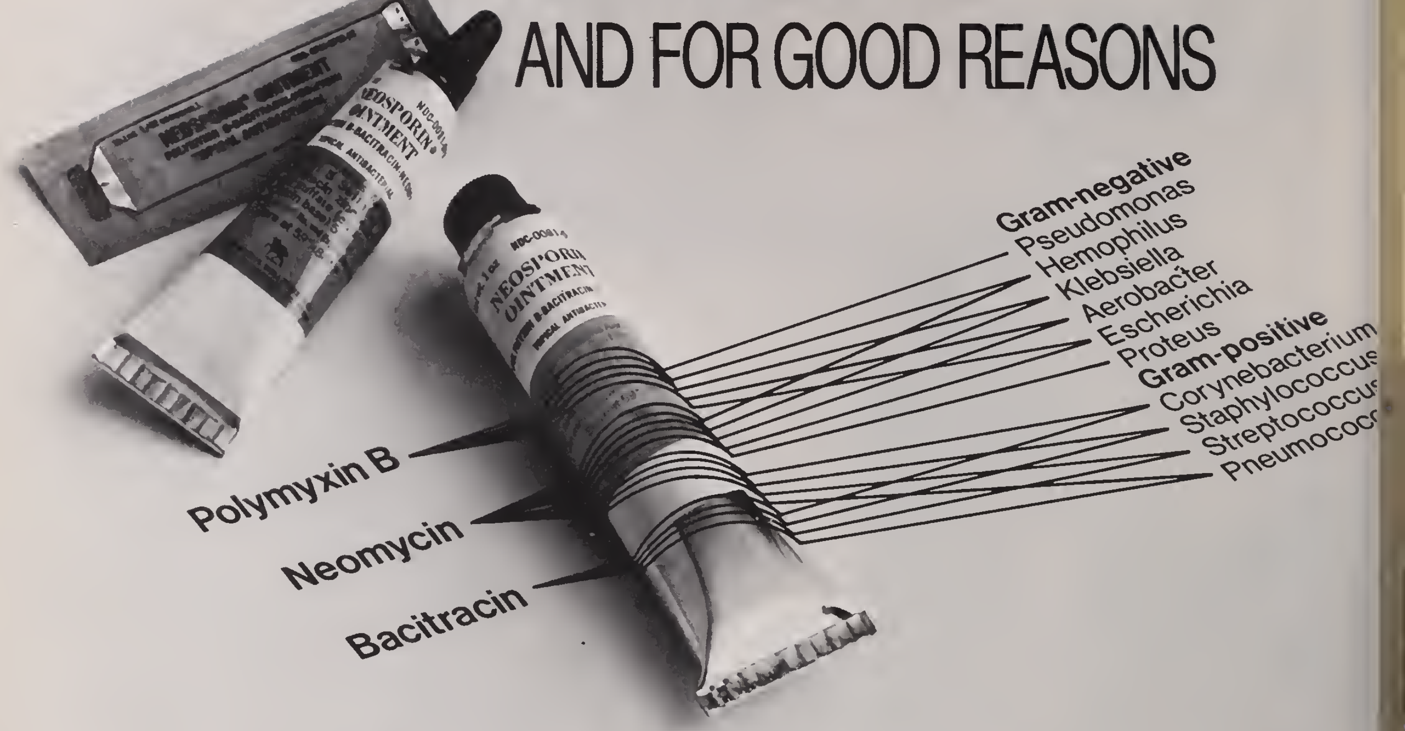
NDC 0108-5022-01
Tagamet HCl Injection
brand of cimetidine hydrochloride
2 ml.
SK&F LAB CO.
2ml.=300mg.
Tagamet
(cimetidine HCl
300 mg.
cimetidine/2ml.
Tagamet
brand of cimetidine
Tablets
100 tablets
NDC 0108-5013-20
SK&F LAB CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation
SKF
T13

Tagamet®
brand of
cimetidine

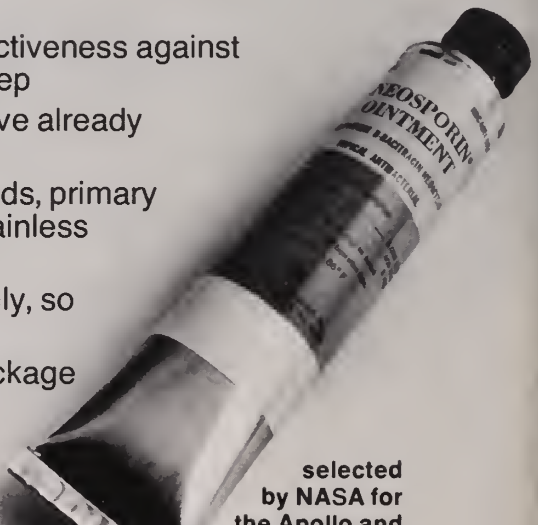
How Supplied:
Pale green 300 mg. tablets
in bottles of 100 and Single Unit Packages of 100
(intended for institutional use only).
Injection, 300 mg./2 ml.,
in single-dose vials
and in 8 ml. multiple-dose vials,
both in packages of 10.

SK&F LAB CO.
a SmithKline company

IT'S HIGHLY RECOMMENDED... AND FOR GOOD REASONS



1. provides broad-spectrum, overlapping antibacterial effectiveness against common susceptible pathogens, including staph and strep
2. helps prevent topical infections, and treats those that have already started
3. it's good medicine for abrasions, lacerations, open wounds, primary pyodermas, secondarily infected dermatoses; and it's painless and cosmetically pleasing
4. contains three antibiotics that are rarely used systemically, so the risk of sensitization is minimal
5. you can recommend it in any of the three convenient package sizes: 1 oz tube, ½ oz tube, or the versatile, single-use foil packet



selected by NASA for the Apollo and Skylab missions

NEOSPORIN® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome
Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

MSMA

NEWS ROUND - UP

December, 1979

Delegates change representation in House; give students full membership in MSMA

MISSOURI STATE MEDICAL ASSOCIATION
Miss Bremer
Mrs. Mahon
DR PETERSON
DR MEYER
Dr Burford
Dr. McCanse
DR. BRADLEY
DR HANSBROUGH
Dr. Martin
Mr. Cooper

Almost 200 MSMA delegates traveled to Columbia to attend the 1979 Interim Session, held November 10-11.

A resolution which provides for equitable representaion for all members in the MSMA House of Delegates nd another one which allows medical students full membership in the MSMA were adopted at the Interim ession of the Association. The session was held Jovember 10-11, 1979 in Columbia, with 195 delegates ttending.

The new amendment to the MSMA Bylaws still entiles each component society to one delegate or one lternate to the House for each 25 full paid members or raction thereof, plus one additional delegate for each 00 members or major fraction thereof, as of December 1 of the previous year. Additions to the Bylaws state hat when a component society's full paid membership eaches 1,000, that society is entitled to 30 additional elegates or alternates and when it reaches 2,000, that ociety is entitled to an additional 50 delegates or alterates.

Each component society which is composed of two or ore counties is still entitled to at least one delegate om each of the counties having one or more member hysicians practicing in that county. Delegates from ulti-county component societies must practice or eside in the county they represent, while alternate elegates may be elected from the entire membership the societies.

With the delegate acceptance of the Report of the Committee on Constitution and Bylaws implementing a resolution adopted at the 1979 Annual Session, the MSMA Constitution now allows medical students membership in the MSMA with all of the rights and privileges of active membership. A medical student will now serve on the Council for a one year term, and each medical school component society is entitled to elect each year two delegates to send to the House of Delegates at the Annual and Interim Sessions.

Student members are limited to those members of component societies who are pursuing a course of study leading to the degree of Doctor of Medicine in a medical school approved by the American Medical Association.

Delegates from the medical school component societies must meet prior to the last day of the Annual Session to elect a medical student Councilor and Vice-Councilor.

The per capita levy for student members is $5 per year.

Continued on Next Page

Interim Session

Continued

Listed below are some of the other Interim Session resolutions and reports which are not discussed in accompanying articles:

●**Equitable Risk Classifications in Medical Liability Premiums** — supports the concept that premium schedules for medical liability insurance should be based on the actual cost and risk of providing that insurance to each individual group or category. (Adopted)

●**National Clearinghouse to Monitor Testimony by Expert Witnesses** — endorses the establishment of a national clearinghouse which would inform the appropriate society of the testimony by one of its members out of the state. (Adopted)

●**Routine Physicals for Teachers** — recommends that the requirement for physical exams be dropped and the only health requirement be a negative test for tuberculosis. (Tabled)

●**Podiatrists Hospital Privileges** — provides information to assist local hospital staffs in making informed decisions regarding application of podiatrists for hospital privileges. (Adopted)

●**Medicaid Reimbursement** — supports the single fee for single service concept in Medicaid payments, the concept that only licensed physicians be reimbursed for medical and surgical services to Medicaid patients, and that no physician currently receiving Medicaid reimbursement have his payments lowered for a given service. (Adopted)

●**Arthritis Plan** — requests that the Arthritis Plan for the State of Missouri, when fully developed, be presented to the MSMA Council for further study and action. (Adopted)

●**AMA Chiropractic Policy** — instructs MSMA delegates to the AMA to suggest to the AMA House that an adequate assessment be levied on all AMA members enabling the AMA to continue to oppose by all legal means the chiropractic intrusion in the practice of medicine. (Adopted)

●**MOMEDICO** — authorizes the MSMA Council to arrange for the redemption of MSMA Subordinated Notes in exchange for an equity interest in MOMEDICO. (Adopted)

●**MSMA Policy on Tobacco Use** — adopts the AMA policy on the hazards of smoking and the need to promote educational and preventive programs related to cigarette smoking. (Adopted)

●**Mental Health** — calls for amendment of State Statutes on Commitment Procedures to allow for commitment of seriously ill and impaired persons who may not satisfy the "dangerousness" criteria but who are nonetheless due to their illness unable or unwilling to accept and obtain proper care. (Tabled)

●**Laboratory Regulations** — expresses objection to the Proposed Clinical Laboratories; Personnel Standards Rules in the Federal Register because of their negative impact on rural hospitals and clinics. (Adopted)

●**AMA Report of the Ad Hoc Committee on Principles of Medical Ethics** — instructs the Missouri Delegation to the AMA to continue the present AMA Principles of Medical Ethics insofar as is possible. (Adopted)

MSMA honors two members of Missouri General Assembly

Two members of the Missouri General Assembly were honored during the November meeting in Columbia.

Dr. John I. Matthews, chairman of the MSMA Committee on Legislative Affairs, presented plaques on behalf of the MSMA to Senator George E. Murray and Representative Judith O'Connor in appreciation for their "dedication and ability in the Missouri General Assembly" and their "continuing efforts to improve medical care for the citizens of Missouri."

Dr. John I. Matthews, chairman of the MSMA Committee on Legislative Affairs, presents a plaque to Senator George E. Murray at the Interim Session. Representative Judith O'Connor was unable to attend the session.

Delegates warn against drugs used for rapid weight reduction

A series of articles was recently published in the St. Louis newspapers concerning adverse reactions of patients attending rapid weight reduction clinics.

Because of this danger to the public, delegates to the MSMA Interim Session voted to publish the following statement in MISSOURI MEDICINE.

"Drugs with thyroid hormone activity, alone or together with other therapeutic agents, have been used for the treatment of obesity. In euthyroid (normal) patients, doses within the range of daily hormonal requirements are ineffective for weight reduction. Larger doses may produce serious or even life-threatening manifestations of toxicity, particularly when given in association with sympathomimetic amines (amphetamines and amphetamine-like drugs) such as those used for their anorectic (appetite control) effects."

MSMA takes stand on legislation

Since the 1980 Missouri General Assembly will begin in a few weeks, the MSMA Legislative Committee is studying the medically-related bills which have surfaced to date and will either favor or oppose them as directed by the House of Delegates.

In their Interim Session Report, the Legislative Committee stated that some of the bills which will receive MSMA support include:

1) Open Formulary — provides an open drug formulary for Medicaid patients.
2) Definition of Death — MSMA will attempt to gain a compromise version which would recognize brain death as one method of determining death.
3) Medicaid Funding — MSMA will again strive for more equitable funding for physician services under Medicaid.
4) Malpractice Package — The Legislative Committee will increase efforts for structured awards, expert witnesses and collateral sources.

The following bills will be opposed by the MSMA in the upcoming session:

1) Medicaid Payments to Nurses — This surfaced last session when the R.N.'s sought direct payment for their services from Medicaid.
2) Optometry Drug Bill — This bill would allow optometrists to use topically applied drugs.

During the Interim Session, the House adopted a resolution instructing the MSMA to continue to oppose any attempt to legislate non-medically trained persons into medical doctors.

3) Chiropractic — The MSMA has long opposed the expansion of chiropractic into the area of medicine. Due to national implications, this area must be reviewed carefully.
4) Licensing of Allied Health Personnel — A Senate Committee is currently studying the entire licensure issue and the MSMA must await the Committee's recommendations.
5) Laetrile — Recent court decisions could somewhat deflate attempts to legalize the use, sale and manufacture of laetrile in Missouri.

As a result of House of Delegate action in Columbia, the MSMA Legislative Committee will pursue legislation on the following issues:

- **Fireworks** — The House adopted this resolution which opposes the sale and use of fireworks by inexperienced and untrained individuals.
- **Department of Health** — MSMA delegates approved the formation of a separate Department of Health in Missouri and the appointment of a licensed physician as head of the department.
- **Premarital Blood Tests** — The House voted to seek repeal of the statute requiring the premarital blood test for syphilis because of its medical and cost ineffectiveness.
- **Psychiatric Detention** — Delegates called for legislative effort to increase the period for initial evaluation and detention from 96 hours to 144 hours for persons believed to be suffering from a mental disorder and presenting a likelihood of harm to himself or others.

The Legislative Committee welcomes the views of any MSMA member on legislation and encourages each member to become involved through contact with his/her lawmakers.

Medical Expert Witness section added to MSMA Bylaws

A section on expert medical witnesses is now included in the MSMA Bylaws as a result of a resolution adopted by delegates to the recent Interim Session.

At the 1979 Annual Session, the House adopted a resolution on expert medical witnesses. However, it was the opinion of the Commission on Medical-Legal Affairs, legal counsel and the sponsor of the original resolution that it should be altered to deal with the problems of witnesses who give false or misleading testimony and also provide options to expulsion from membership. Therefore, an alternate resolution was proposed and adopted at the Interim Session.

The Bylaws now read: *(new language in bold type)*
Chapter IX. Rules of Conduct

Section 1. The ethical principles governing the members of the American Medical Association shall govern members of this Association.

Section 2. **Any member of this Association who testifies as a medical expert witness outside of the specialty of the physician represents unethical conduct. In the future, any physician who testifies as a medical expert witness outside of his specialty or logical extension of his field of expertise or who interferes with the proper administration of justice by misrepresenting his qualifications or giving false or misleading testimony will be subject to expulsion, censorship, or reprimand after due process from the Missouri State Medical Association.**

Any member of this Association who testifies as a medical expert witness without meeting the qualifications set forth in this section, shall be subject to expulsion, censorship, or reprimand after a due process hearing as set forth. An expert witness must have basic educational and professional knowledge as a general foundation for his testimony and in addition, have current personal experience and practical familiarity with the problems being considered and be actively engaged in the practice of the medical subject under discussion.

Nothing in the above is to be construed as preventing the treating physician from testifying on the merits of the case.

Foundation makes policy changes on its loans

The Missouri State Medical Foundation reported in November that it has granted 1,700 loans to 671 different medical students since its inception in 1960. Today the average loan is $750 per semester, the maximum a student may receive each semester, or a total of $1,500 per year.

The Foundation, sponsored by the MSMA, has recently adopted a number of policy changes in order to cut back the need for assessments in the future:

●The former contract provided that a student pay 2 percent per year on his loan until he completed one year of private practice. This has been raised to 4 percent.

●Loans will be granted only to junior and senior students and, in the six-year program at the University of Missouri at Kansas City, to those in the last two years.

●Repayment of the loans on a four-year schedule has been instituted.

●Due to increased income of residents and fellows, interest on the unpaid principal will become due after graduation from medical school.

●After graduation and during resident training, the interest rate has been raised to 8 percent and will continue at this rate until after one year of private practice. Following the year of private practice, the interest will increase to 10 percent.

Besides membership assessments, there are two other sources of the Foundation funds for medical students: repayments and contributions. Contributions are a significant source of funds and this year the following individuals and groups made generous donations to help Missouri students through medical school. This list includes contributions made through November 30, 1979.

Boonville Medical Group
Max S. Franklin, M.D.
Mary E. Case, M.D.
J. Otto Lottes, M.D.
Dr. and Mrs. J. Loren Washburn
Clay County Medical Association Auxiliary
Buchanan County Medical Society Auxiliary
MSMA Auxiliary
MSMA Staff
St. Louis Metropolitan Medical Society Auxiliary
Pettis County Medical Society Auxiliary
Cole County Medical Society Auxiliary
Woman's Auxiliary to St. Louis Medical Society
Grand River Medical Society Auxiliary
Sanders Rexall Pharmacy
Miller's Medical Arts Pharmacy
Long's Drug Shop
Pryor's Medical Pharmacy
Royal O. Cooper

The Foundation Board also urges physicians to remember the Foundation in bequests. Donations to the foundation are tax deductible.

MSMA urges component societies to review membership requirements

Because the federation of organized medicine must continue to pursue aggressive programs to represent the profession, to pursue scientific excellence and to participate in insuring high quality medical education and because a decreasing share of the physician population is footing the bill for these activities, the House of Delegates adopted a resolution to try to increase membership.

Looking at the facts — only about 48 percent of eligible physicians belong to the AMA, and more than 1,200 physicians in Missouri do not belong to any medical society — the House resolved that the MSMA, in cooperation with component societies and the AMA, should make every possible effort to increase membership at all levels of organized medicine.

In a survey of local medical societies by the AMA, it was found that 63 percent of the societies do not have any new member recruitment programs and 51 percent have waiting periods longer than three months from the time of application to the time of acceptance.

The MSMA is urging component medical societies to activate membership committees to locate and recruit non-members and to review and update entrance requirements so the process of joining organized medicine is less complicated and time consuming.

MSMA Committee on the Impaired Physician
Confidential 24-hour Recorded Message Telephone Number
314-636-5744

IS IT STREP?
Isocult® answers on the spot.

in-office diagnostic culturing system

- identifies beta-hemolytic streptococci in 24-48 hours
- provides a convenient method of testing for cure
- detects carriers in patient's family
- simple, reliable, efficient

ocult® culture tests also available for:

- Bacteriuria
- Neisseria gonorrhoeae
- Candida (Monilia)
- Combination N. gonorrhoeae/Candida
- Trichomonas vaginalis
- Combination T. vaginalis/Candida
- Staphylococcus aureus
- Pseudomonas aeruginosa

S

Send to:
SmithKline Diagnostics
880 West Maude Avenue
P.O. Box 61947
Sunnyvale, CA 94086

Please send me additional information on the Isocult® In-Office Diagnostic Culturing System

Name ____________

Medical Specialty ____________

Address ____________

City ________ State ________ Zip ________

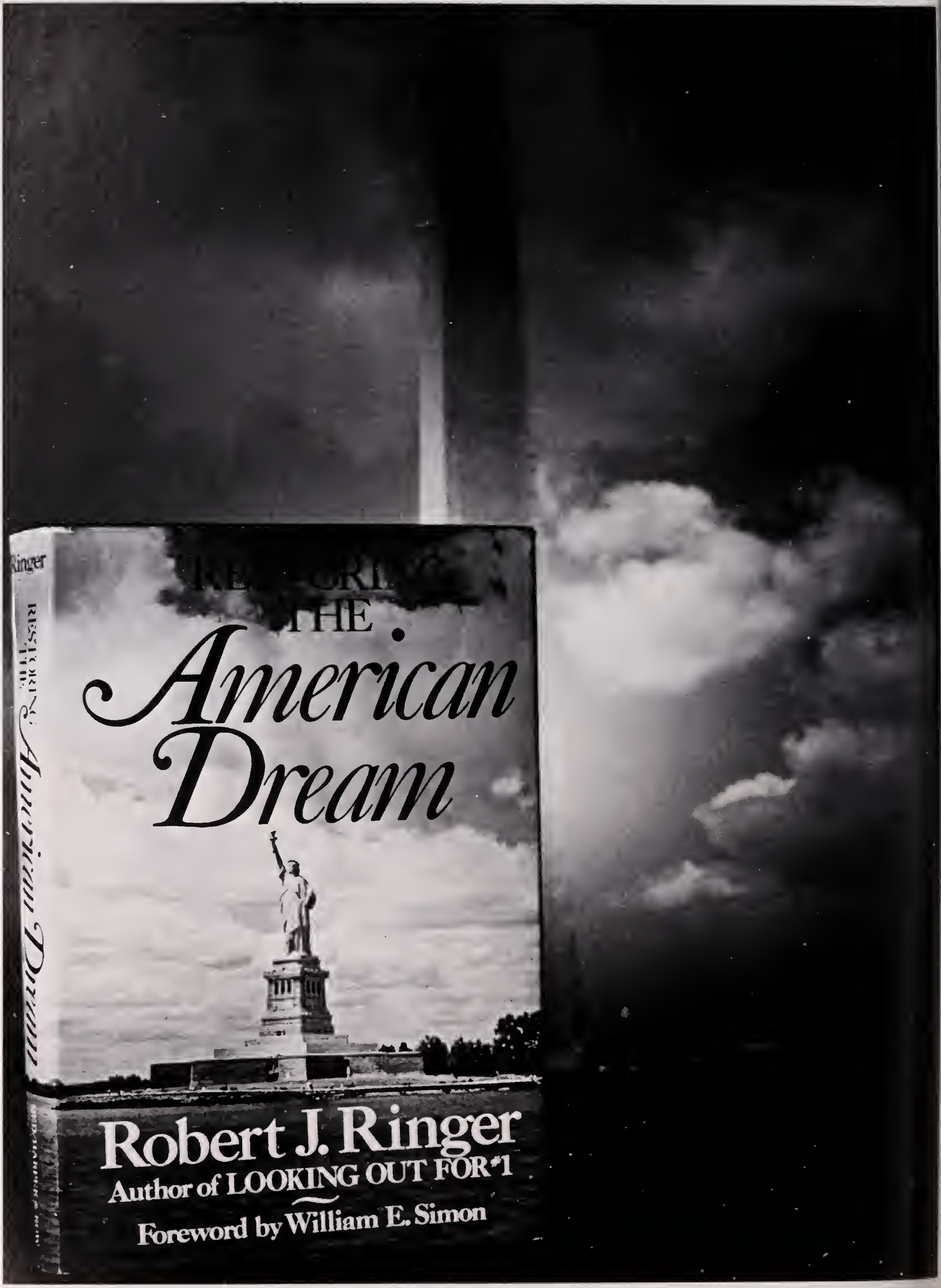
Telephone ____________

SKD
SmithKline company

©SmithKline Diagnostics, 1979

SmithKline Diagnostics
880 West Maude Avenue • P.O. Box 61947 • Sunnyvale, CA 94086

Photo-Comment by James W. Clawson, M.D., Springfiel


Ringer
RESTORING THE American Dream
THE
American
Dream
Robert J. Ringer
Author of LOOKING OUT FOR #1
Foreword by William E. Simon

Editor's Corner

AND A HAPPY NEW YEAR, TOO!

In 18 years of being an editor of sorts, this is only the second time I have editorially recommended a book. This is a biggie! Perhaps the best Christmas I could hope to receive would be for 100 of you to read this book and then tell your friends how good it was. Might very well start a ripple that could grow and yet salvage the republic. It's that important! In fact, it is so engrossing that I loaned my copy to James Clawson so that he could make the opposing photograph and I have yet to get it back.

This book is "Restoring the American Dream" by Robert Ringer, published by the QED division of Harper & Row. It is very readable and is certainly the most clear exposition of the present political and politically immoral position of our government which has come my way. It lays out irrefutable reasons why America is on a crash course with economic reality. It tells in detail how the honest, decent, hard-working segment of our population is being ripped off by their government. It even offers solutions which might be achieved by an aroused citizenry while there is still time.

A very fair and reasonable foreword is written by an important man, William Simon. I regard Simon as so honest that he is the only person I have known to become enmeshed in a love affair with the federal government at the Washington, D. C. level and to escape with his virginity.

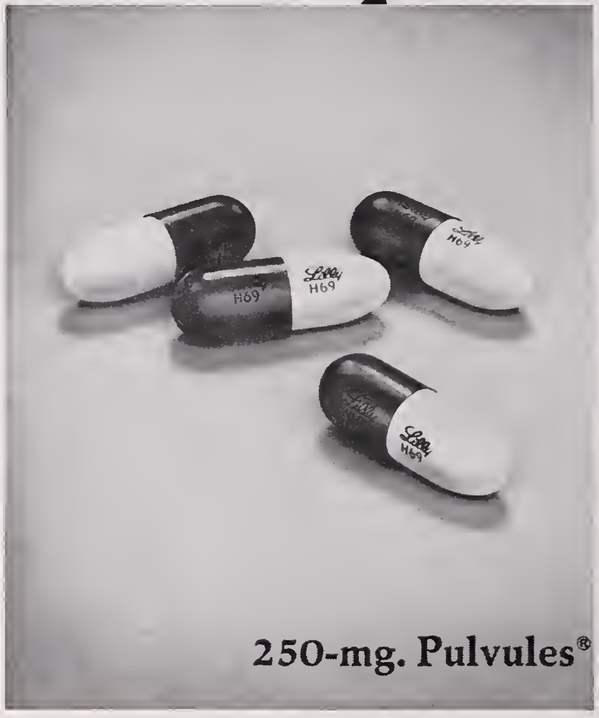
Try it! I have no doubt that it will make you shudder. If it doesn't, read it again because you were asleep the first time.

It will cost you $12.50, hard-bound. Not soft-bound yet, but don't waste time. You might not have enough time to wait for the soft-bound edition.

Merry Christmas!

Wilfred E. Wooldridge, M.D.

easy to take


Lilly
H69
250-mg. Pulvules®

Oral Suspension
250 mg./5 ml.
100 and 200-ml.
sizes
125 mg./5 ml.
60, 100, and
200-ml. sizes

Pediatric Drops
100 mg./ml.
10-ml. size

Keflex®
cephalexin

Lilly
500738

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Volume 76, Number 12—December, 1979

Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

Copyright, 1979 by Missouri State Medical Association. All Rights Reserved.

Dr. Ellis Fischel

by
Samuel D. Soule, M.D.
St. Louis

One of the ancillary boons which comes to a medical historian is the occasional discovery of a heretofore unrecognized manuscript. A retired and respected peer, Dr. Edward Lawrence Keyes, brought to my attention a manuscript which he prepared in 1958. This was a biography of Ellis Fischel, M.D., "a man of colossal energy, fine idealism and dogged fixity of purpose." We shall abstract Larry Keyes's monograph about this pioneer in cancer treatment.

Ellis Fischel was born into a medical environment. If there could be a gene which controls one's eventual destiny, he inherited one connected with medicine. His grandmother was a sister of the Taussigs whose family tree eventually produced Albert and Frederick Taussig, both of whom were inspiring influences in the 20th century. Ellis's father was Dr. Washington Fischel, who was prominent as a teacher and practitioner. Washington Fischel became a professor at Washington University School of Medicine when the St. Louis Medical College united with the Missouri Medical College to create the Medical Department of Washington University. Ellis's uncle, Dr. George Gellhorn, trained in Germany, was a dominant member of the obstetric and gynecologic faculties of both medical schools at various times.

Ellis Fischel was born on July 3, 1883. He was educated at Smith Academy, a private boys' school which was associated with Washington University. He entered Harvard at 17 and graduated in 1904. He was not noted for remarkable scholastic ability but was a good baseball player. Franklin Delano Roosevelt was a classmate.

After graduation, Fischel worked in the foundry of a cousin in New Jersey before yielding to the pleas of his matriarchal mother to come home to study medicine. He attained scholastic standing on merit, becoming a member of Alpha Omega Alpha during his senior year, graduating in 1908. During his internship at St. Louis City Hospital, Ellis Fischel impressed Dr. William T. Coughlin so favorably that Coughlin selected Fischel to substitute in his office in the Metropolitan Building during an absence created when Coughlin's associate, Vilray P. Blair, was incapacitated.

In 1911, Dr. Fischel left for 20 months study in the major medical centers of Germany and England, observing the recent advances in orthopedics, genito-urinary surgery and anesthesia. On return to St. Louis, sharing an office with his father and his brother was not fulfilling. He was eager to make a place for himself in an already

Dr. Soule is the author of the biographies entitled "Our Medical Ancestors" and is a member of the Bulletin Committee, St. Louis Metropolitan Medical Society. He is Professor Emeritus of Clinical Obstetrics and Gynecology at Washington University School of Medicine and Senior Obstetrician-Gynecologist at The Jewish Hospital of St. Louis.

Reprinted with permission from *St. Louis Metropolitan Medicine*, March 14, 1979.

Ellis Fischel, M.D.

crowded profession.

Marriage to Marguerite Kauffman came in 1913 in the Kauffman residence which then, with its grounds, occupied an entire block at Kingshighway and Lindell. Two sons were born. The first son, Ellis Jr., died in 1918; son John survived.

World War I came just as Dr. Fischel was attaining a small foothold in more or less secure living. Prepared to sacrifice his growing practice, he was exempted from active service and was designated Medical Reserve Corps, Class IV by the military Medical Board. He spent the next two years in most active practice and most passive rebellion against the fate that kept him out of the "Big Show." He tried to do as much work as possible for those who had gone off to war. In addition to helping care for his first born, who was paralyzed from birth, he took over the charity services at City Hospital and Barnard Hospital.

Dr. Fischel kept Vilray Blair's office open during the latter's time spent with the American Expeditionary Forces. When Blair returned in 1919, he rewarded Fischel with a full partnership which lasted for the rest of his life. Blair now was almost exclusively a plastic surgeon and Fischel attacked cancer in every part of the body.

When the Jewish Hospital moved to its present location, Dr. Major G. Seelig appointed Dr. Fischel to the surgical staff. After 1926, he did most of his private surgery there and, in 1930, he was appointed co-director of the Department of Surgery with Dr. Max Meyer, a position Fischel held until his untimely death.

General surgery, fractures and anesthesiology were his primary interests when Fischel returned from his European studies. Soon cancer therapy became dominant, both in practice and teaching. Academic appointment at St. Louis University was succeeded in 1937 by a similar appointment at Washington University. Recognized by his peers, Fischel was named president of the St. Louis Surgical Society in 1934.

Dr. Fischel was the first chairman of the Cancer Committee of the Missouri State Medical Association. A generous gift from Edward Mallinckrodt, in 1935, made a survey by the American Cancer Society possible. Lay education, physician teaching and the facilities for proper diagnosis and treatment were the basic criteria espoused by Dr. Fischel for the creation of an ideal facility. The State Cancer Hospital became a reality during the reign of Gov. Lloyd C. Stark. The Assembly appropriated one-half million dollars and Columbia was selected as the hospital site. Dr. Ellis Fischel was made chairman of the State Cancer Commission.

Because of the inability of Marguerite Fischel to tolerate the sooty St. Louis atmosphere, the Fischels found an old farm site near Portage des Sioux. Here the clear atmosphere eliminated his wife's sinusitis. The clear air, the high wooded cliffs and the unforgettable sunsets made Hidden Spring Farm their home for the next ten years.

After making rounds on Saturday morning, May 14, 1938, he hurried home to Hidden Spring to pick up his wife. Fischel, who was always a fast driver, possibly was driving even faster than usual for their luncheon appointment with Governor Stark and Surgeon-General Thomas Parran in Columbia. His car struck a truck which was turning into the highway from a filling station. The car turned over several times. Dr. Fischel was killed instantly. His wife was injured severely, recovered and lived ten years longer.

Thus died Ellis Fischel who had written that of himself, "the greatest interest in life as I have found it in my daily contract with my fellow man, both in health and disease. The greatest rewards come through what we personally mean to a few obscure individuals. The greatest thrill is from public recognition of work well done."

(Continued on page 632)

EUGENE M. BRICKER, M.D., *Columbia*

Ellis Fischel State Cancer Hospital After 40 Years

In recognition of the Ellis Fischel State Cancer Hospital's 40 years of service for Missourians, the Chief of Staff presents a brief history of the hospital and its relationships with other area institutions concerned with cancer research, treatment and patient care.

Dr. Bricker also is Associate Director, Department of Surgery at the Hospital and Senior Scientist at the Cancer Research Center.

This investigation was supported in part by Clinical Cancer Education Program Grant CA-17946 from the National Cancer Institute, Department of Health, Education and Welfare.

AT THIS TIME, 40 years ago, construction was just being completed on what was to be called the Missouri State Cancer Hospital. Dr. Ellis Fischel, a prominent St. Louis surgeon primarily interested in cancer, had had a major role in the establishment of the hospital and his untimely death in an automobile accident led to the change of name in his honor.

The hospital was established for the care of Missouri citizens certified by a county court as being medically indigent and referred to the hospital by the patient's physician for the diagnosis and treatment of cancer. It functioned under a Cancer Commission appointed by the governor and responsible directly to him. The hospital was staffed by full-time, salaried personnel and the initial professional departments were radiation therapy, pathology and surgery. No patient was charged for hospitalization or professional care. Yearly appropriations from the legislature were the sole source of funding.

The early years of operation of the hospital were devoted entirely to patient care and to the establishment of the administrative, nursing and social service procedures that were necessary for its function. It was during this time that the quality record system was established. It persists to this date. With superb social services and medical records departments, it has been possible to maintain an incredible 100% follow-up on all patients with malignancies. This has made possible a great number of clinical papers on end results reporting, treatment modalities and technical advances. Although in the beginning time and facilities did not permit embarking on basic research, the staff took full advantage of the unique clinical material that was available to study and follow. All records of all patients are still intact, available and retrievable on very short notice.

A residency training program was established and maintained for years chiefly through rotations with the Department of Surgery of Washington University School of Medicine and later with other hospitals in St. Louis and Kansas City. Throughout the years, the Departments of Radiation Therapy and Pathology have provided an important part of the training of residents and fellows in these specialties and furnished valuable adjunctive training for surgical residents.

For a physician interested in treating cancer patients in an academic environment, the Ellis Fischel State Cancer Hospital (EFSCH) provided a wonderful and pleasant opportunity. Because of low salary schedules, the turnover of professional staff was relatively rapid. Salaries are now at more realistic levels. The hospital has offered a strong training experience for many physicians of Missouri and elsewhere. A large number of physicians who have gained national and international prominence have profited by experience here.

Nothing remains the same. Change has affected the State Cancer Hospital as it has all other facets of our lives. Although the bed capacity has remained essentially the same, the complexities of operation have multiplied. Technological advances, and their accompanying support and regulations, make the early days a primitive utopia by comparison. Like everywhere else, red tape and paperwork have flourished. However, the state has been very supportive and EFSCH is no worse off than other institutions facing similar problems.

Several events have contributed to changes in the hospital since its opening. One of the most

Ellis Fischel State Cancer Hospital — 1939

important of these was the establishment of the Cancer Research Center (CRC) in 1964 shortly after Dr. John Spratt arrived at the hospital as chief of surgery and director of the Department of Surgery. Largely through the initiative of Dr. Spratt, the CRC was developed for the purpose of being the receptacle and fiduciary for grant money and contributions and, eventually, of becoming the research arm of the hospital. It was established as a private, not-for-profit corporation with its own Board of Directors and was located adjacent to the EFSCH on land originally contributed by the city of Columbia.

Another event of great importance was the passage of the National Cancer Act of 1971 which provided the possibility of substantial federal grants in an accelerated multiphasic fight against cancer. Since this time, the CRC has played an increasingly important role in grant applications and administration. In addition, the CRC has served as the base of operations for State Cancer Control, for the Missouri Cancer Registry and for one of the most successful of the national Breast Cancer Detection Demonstration Projects.

The current administrative director of the CRC has been instrumental in completely filling the laboratory space in the CRC Allton laboratory building with basic scientists who are under supervision of the CRC scientific director. The main thrust of basic research at this time is in the field of cancer immunology, with emphasis on the isolation, purification and study of lymphokines, a field in which this team of scientists is preeminent. Also, the CRC is closely affiliated with various departments and schools at the University of Missouri, including the medical center.

Of importance to the EFSCH was the state administrative reorganization in 1974 which placed the hospital under the Division of Health of the Department of Social Services. The Cancer Commission was reduced to being only of advisory capacity to the Division of Health and has not been active since the reorganization. Since this time, the hospital has functioned directly under the director of the Division of Health. The staff feels that this change has not been in the best interest of progress for the hospital and that there is a need for some type of governing board to help to set hospital policy and to act as advocate in budgetary deliberations.

The University of Missouri Medical Center (UMMC) became a four-year school in 1956. Prior to this, it had provided the two basic science years of medical training and students went elsewhere for completion of the required four years. The development of the clinical departments at UMMC was followed by a slowly growing affiliation between the UMMC and EFSCH which only now is reaching a formalized stage. Agreements of affiliation are being negotiated among the various departments of the two institutions. It is anticipated that these will be followed by an umbrella

Ellis Fischel State Cancer Hospital — 1979

agreement among the University, the State Cancer Hospital and the Division of Health. In general, the agreements of affiliation will simply affirm the intent to collaborate closely in teaching and doing research and in sharing specialized facilities and equipment for the best interest of patients and to avoid unnecessary duplication. The agreements will recognize the desirability of oint appointments and academic titles. However, each institution will retain its individuality and autonomy. The time has come for this kind of association between these two institutions.

In addition to collaboration with UMMC, the EFSCH still retains close ties with Columbia physicians in the private sector who are called on requently for consultation, for their specialized abilities and for clinical service support when it is needed. This kind of willing support has been nvaluable.

The Medicare Act was passed in 1965 with payment of benefits beginning in 1966. It was not ntil 1972 that the legislature revised the law to ermit collection from third parties for hospitali-ation and to allow the admission of non-indigent atients. Certification of indigence was no longer ecessary, but referral by a physician or dentist was and is still required.

Upon the insistence of the professional staff, he law was again changed in 1977 to permit billng third parties for professional services as well as or hospitalization. The funds collected for professional services go through the state treasury and must be appropriated by the legislature after budgetary application by the staff. It was, and still is, the intent that the funds from professional services be earmarked for the staff to use for such purposes as research seed money, staff travel and education, provision of a policy for sabbatical leave, special items of equipment and other purposes the staff feels appropriate.

This program is only in its second year and it is too early to determine whether the administration and use of professional service funds will satisfactorily meet the criteria and intent of the professional staff. It is possible that adjustments will have to be made as experience accumulates.

Although the bed capacity has increased very little since 1940 (currently 113 beds), the physical plant has been more than doubled by an addition in 1975. The addition provides much needed clinic and clinical laboratory space and a completely modern operating suite with accompanying recovery and intensive care units. The space for the Radiation Therapy Department has been greatly enlarged and a 40 MeV linear accelerator has been added.

When the hospital opened in 1940, the professional staff consisted of three full-time members — a surgeon, a pathologist and a radiotherapist. There is now an authorized professional staff of 17 consisting of pathology, three; radiotherapy, three; radiation physics, two; surgery, three;

medicine, three; maxillofacial, one; anesthesia, one; and clinic, one. This staff is supported by a full complement of nurses, nurse anesthetists, laboratory technicians, respiratory and stomal therapists, and other paramedical personnel necessary to provide the type of patient care for which the hospital is responsible. Approved oncological fellowship training is provided in surgery, medicine, pathology and radiation therapy. The surgical service is closely affiliated with that of UMMC and serves as an important part of its surgical training program.

The EFSCH has served the people of Missouri well for the past 40 years. The many outstanding physicians who have served on its staff have left a legacy of excellence that is being maintained despite the multiplicity of time-consuming minutia that has become an inseparable part of the changing times. The medical records of the hospital are unequaled, the social service is outstanding, the patients are processed by the professional staff in the same multidisciplinary systematic manner as always. The clinical and pathological spectra of referred patients have changed, as have the techniques and modalities of treatment. However, the hospital remains a uniquely appropriate place for the cancer patient and for the doctor or student interested in learning about cancer and caring for cancer patients. A teaching program for residents, fellows and students is maintained throughout the year. The usual morbidity and mortality conferences are supplemented by departmental conferences and ward rounds. The Saturday Multidisciplinary Problems Conference is well attended by physicians from the private sector and UMMC.

Twice a year (spring and fall), scientific conferences are held with invited speakers, the meetings being widely advertised for the physicians of Missouri. The meeting in April 1980 is planned as the celebration of the 40th anniversary of the opening of the hospital and will be built around two of the original staff of that time, Dr. Juan del Regato and Dr. Lauren Ackerman. It is anticipated that other important alumni of this institution will participate in the meeting, details of which will be announced at an early date. The meeting is scheduled for May 3, 1980.

Among the current projects and problems under consideration by the professional staff are the following:

1. Search for a director of the Department of Radiation Therapy
2. Establishment of an acceptable policy of sabbatical leave
3. Consideration of the re-establishment of a governing board or commission
4. Study of the possible need for and the role of a medical director
5. Need for state funding of basic research
6. Continued monitoring of the use of funds collected from third parties for professional service
7. Continued and increased collaboration among the consortium of the EFSCH, the CRC, the UMMC and the Columbia and regional private sector in the fields of teaching, research, and patient treatment
8. Participation in an appropriate manner with the development of a statewide cancer control and education program which should logically be developed around the central Missouri-Columbia consortium.

Admission to the Ellis Fischel State Cancer Hospital can be arranged by physician or dentist by calling the clinic director or any other member of the active staff. New patients for admission are seen three times weekly (Monday, Wednesday and Friday). The patient receives a complete examination and then is seen by senior staff at a multidisciplinary conference at which time a preliminary plan of management usually is determined. The patient and family are informed of the findings and the plan. It saves time if the findings of the referring physician, including pathology slides, x-rays and other pertinent information, accompany the patient or precede his or her appearance at the clinic. The telephone number of the hospital is 314-449-2711.

Reprints: Eugene M. Bricker, M.D.
Ellis Fischel State Cancer Hospital
115 Business 70 West
Columbia, MO 65201

Dr. Ellis Fischel

(Continued from page 628)

Detailed reviews of his surgical accomplishments may be read in Dr. Keyes's monograph. The most fitting epitath to this remarkable man may have been expressed in the dedication of the State Cancer Hospital as the Ellis Fischel State Cancer Hospital . . . "as a fitting tribute to the man, who more than any other, made the people of Missouri aware of the true nature of Cancer."

C. EUGENE RIDENHOUR, M.D., NARAYANAGOUD MEMULA, M.D.
and LARRY L. DOSS, M.D., *Columbia*

Radiation Oncology at Ellis Fischel State Cancer Hospital

IN THIS ARTICLE, the authors review past and present accomplishments of the Radiation Therapy Department at Ellis Fischel State Cancer Hospital (EFSCH) with the intent of proudly displaying its work to our medical colleagues, Missouri citizens and supporting government. By historical review and understanding the facility's development, we can show how the department has achieved its present state of excellent patient care. With constant training and education coupled with research efforts, it is our hope that it will constantly improve.

HISTORICAL REVIEW

By 1931, Missouri citizens had recognized cancer as their number two killer. Through the efforts of the Missouri State Medical Association and certain outstanding leaders (Drs. Ellis Fischel, D. A. Robnett, M. P. Neal and Earl Padgett), an ambulatory tumor clinic had been established at State Hospital #1. Two grave problems were noted there by 1933: (1) the patients could not be admitted to that hospital unless they be declared "insane" as required by the admission policy of the Missouri Eleemosynary Board, and (2) $20,000 had been spent on helping only six of the cancer patients because the staff had been seeing advanced terminal patients and physicians were untrained and unskilled in radiation therapy management.[1]

By 1936, the Cancer Commission had obtained the use of 36 inpatient beds, and a handful of physicians gave freely of their time and efforts. However, Dr. Fischel dreamed of a statewide plan for cancer control. St. Louis had the Barnard Free Skin and Cancer Hospital, but it could not continue to serve all the indigent patients. Dr. Fischel and Gov. Lloyd Stark, a courageous leader and civic-minded politician, persuaded the legislature to appropriate monies to support a "State Cancer Hospital" and charged its leaders to render the best possible care for the indigent cancer patients with current knowledge and facilities.

Temporary quarters were established in Fulton. Governor Stark insisted that the hospital be in Central Missouri for accessibility across the state. He chose Columbia so that it would be near the University. Some physicians feared that socialized medicine was at hand. Politicians from the larger cities preferred that it be located in their city. Some suspected that it was a subterfuge effort toward gaining a four-year medical school in Columbia. Some citizens shouted duplication of facilities!

The Columbia City Council gave $20,000 to buy the present 40 acres and a 104-bed hospital was built. Dr. Fischel, a prominent St. Louis surgeon and user of radium since 1924,[2] served as chairman of the first Cancer Commission. In 1938, he was killed in an automobile accident while on his way to a commission meeting. The building was opened in April of 1940 and named in his memory.

The Department of Radiation Therapy was one of the three original departments for caring for patients.[3] Further, the chief radiation therapist,

---

The history of Ellis Fischel State Cancer Hospital's Radiation Therapy Department is, indeed, illustrious. One of the three original departments at EFSCH, its chiefs were leading pioneers and teachers of the art, and many well-known radiation therapists have been members of the department.

Dr. Ridenhour is Clinical Associate in Radiation Therapy at EFSCH and the Cancer Research Center. Dr. Memula is Staff Radiation Therapist and Dr. Doss is Acting Director, Department of Radiation Therapy, EFSCH. Drs. Memula and Doss are also assistant scientists at the Cancer Research Center.

This investigation was supported by Grant No. CA-17946 from the National Cancer Institute, Department of Health, Education and Welfare.

Dr. T. E. Eberhard, was the Cancer Hospital's first medical director (Fig. 1). His early guidelines and policies laid a solid foundation. An example is the 100% patient follow-up concept that established data for future retrospective scientific studies. Members of the Social Service Department, directed by Mrs. Miriam Hoag, have worked diligently and continuously to maintain these records over these past 40 years.[4] The abundant accumulated valuable knowledge of cancer treatment gives insight into natural history and serves as a basis for various therapeutic approaches.

Although the early years of operation were devoted entirely to patient care, the appointment of department heads, either by intent or serendipity, proved to establish the superiority of its scientific endeavor. These early appointees (Dr. Eugene Bricker in surgery, Dr. Lauren Ackerman in pathology and Dr. Juan del Regato in radiation therapy) subsequently have become prominent leaders in their specialties.

DEVELOPMENT OF TREATMENT METHODS AND EQUIPMENT

When the hospital opened on April 26, 1940, roentgen ray therapy was provided by three machines, each having a kilovoltage range from 80 to 220 kVp (Fig. 2). Partly owned by the hospital and loaned by the National Cancer Institute, 700 mg of radium were available.[2] By the time World War II was underway, Dr. Eberhard had feared a radium shortage and had astutely over-ordered to keep a generous supply available throughout the war. Radon implanting instruments were owned by the hospital. However, emanation (radon 222 by the Curies) was purchased as needed to avoid the excessive cost of operating a radon plant. For the years 1940 through 1955, these three therapy sources served as the facility's foundation for the outstanding accomplishments in radiation therapy of Drs. Eberhard, del Regato, Moss and Sala. From the very onset, the department had good equipment and strong leaders to enhance and nurture the multidisciplinary management of the cancer patient.

By the mid 1950s, telecobalt therapy came into being. By April 5, 1955, the hospital had installed a cobalt unit made by Picker. The hot Missouri sun had produced a generous supply of skin and head and neck cancers. The radiotherapists had demonstrated their skills in treating these with orthovoltage. However, one can easily imagine Dr. Sala's excitement over his new cobalt machine. More effective energy was available to enter deeper areas for better control of cancers of the cervix, endometrium, bladder, bone, stomach and, even, lung.

In 1949, Dr. Modlin[5] reported an overall five-year cure rate of 25% for carcinoma of the cervix with orthovoltage. It was the third most commonly encountered tumor. Apparently by improved techniques, Dr. del Regato had increased the cure rate to 37% by 1955.[6]

The radiotherapists were beginning to report better survival rates with irradiation of cervix cancer than with surgery. Drs. del Regato and Sala have contributed the concepts of transvaginal therapy, of treatment for chronic lymphocytic leukemia and soft tissue sarcoma, and of management of gynecologic cancers. Further, Dr. Sala proved that carcinoma of the endometrium is best treated with preoperative irradiation to prevent vaginal implant recurrences or metastases.[7]

On Oct. 1, 1966, an isocentric cobalt unit (Theratron) was added to facilitate rotational therapy in certain cancers (bladder, prostate and esophagus). At about this time, the medical physicists were recognized and trained as integral parts of the team. Although they previously were used in brachytherapy treatment planning, their assistance was needed in planning rotational fields, calculating dose distributions in large irregularly shaped fields, and determining computer-aided dosimetry.

In 1975, Ellis Fischel Hospital's bed capacity was increased from 100 to 120 by renovation and a new wing. There was additional laboratory space, a new operating room suite and a facility built to house a new Sagittaire unit, the ultimate in linear accelerators, providing electrons up to 40 MeV and high energy photons up to 25 MeV (Fig. 3). The Sagittaire was installed and ready for use by Dec. 16, 1976. After-loading implants with radium or iridium was becoming a part of advances. Interstitial implantation with iodine 125 was becoming popular as treatment for early carcinomas of the prostate.

A treatment simulator was installed by Dec. 21, 1977 to permit better tumor localization (Fig. 4). An ultrasound unit also was added and computer-aided tomography was shared with neighboring hospitals. For those patients who could benefit from neutron therapy, Fermilab in Chicago provided us with a ready access to its facility. Further, Dr. Sala in New Mexico accepts referrals of those patients who could benefit from

Fig. 1 Dr. T. E. Eberhard, the first medical director of Ellis Fischel State Cancer Hospital, treats a patient. Dr. Eberhard was a radiation therapist.

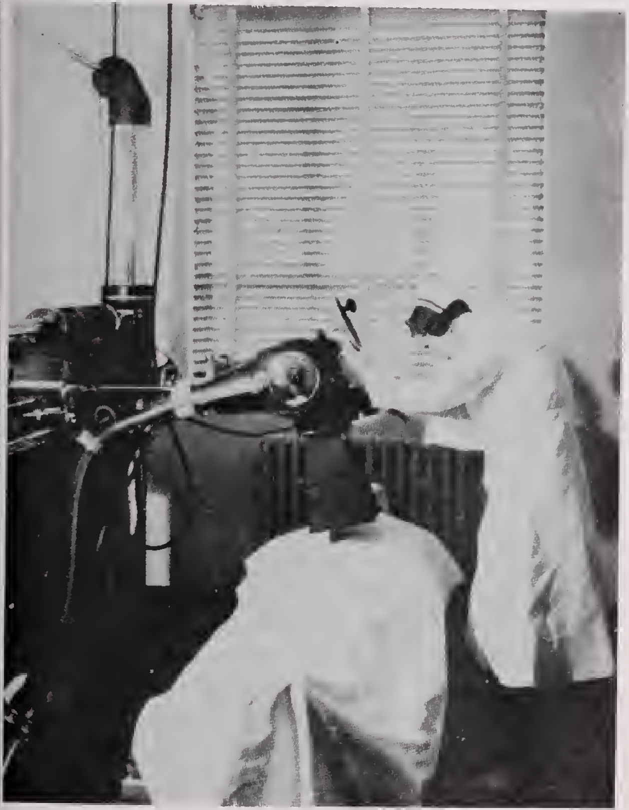


Fig. 2 Ellis Fischel State Cancer Hospital's first roentgen ray therapy unit (80 to 220 kVp).

Pi Meson therapy. With all the aforementioned equipment, optimum treatment scheduling and individualized immobilization and blocking techniques, the patient entering Ellis Fischel State Cancer Hospital for irradiation therapy is receiving the best possible care.

PATIENT CARE

When we speak of patient care, we must emphasize the fact that EFSCH is a treatment facility and not a terminal care facility. Treatment of the cancer patient has always been the hospital's purpose for existing.

For reasons of geography, advanced ages of some patients and disability from cancer, most of the patients at EFSCH first receive treatment on

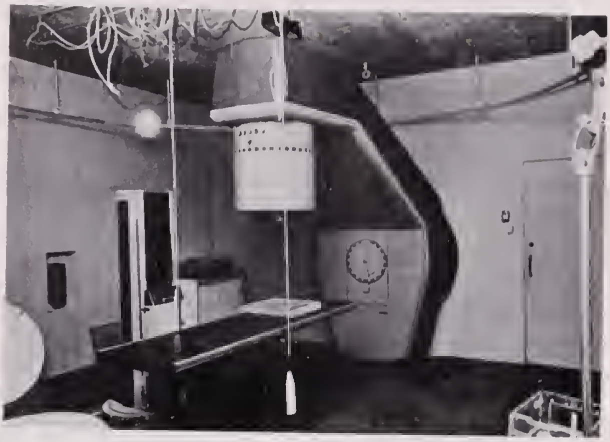


Fig. 3 Some patients are treated at the Ellis Fischel State Cancer Hospital with the Sagittaire linear accelerator. Patients may receive treatments with electrons (8-40 MeV) and photons (8-25 MeV).

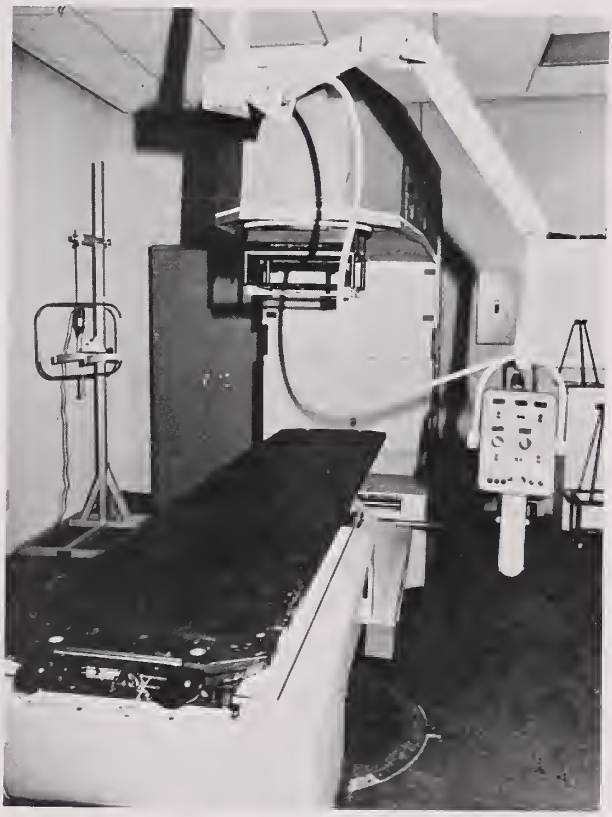


Fig. 4 A treatment simulator permits better tumor localization prior to treatment with a unit like the linear accelerator.

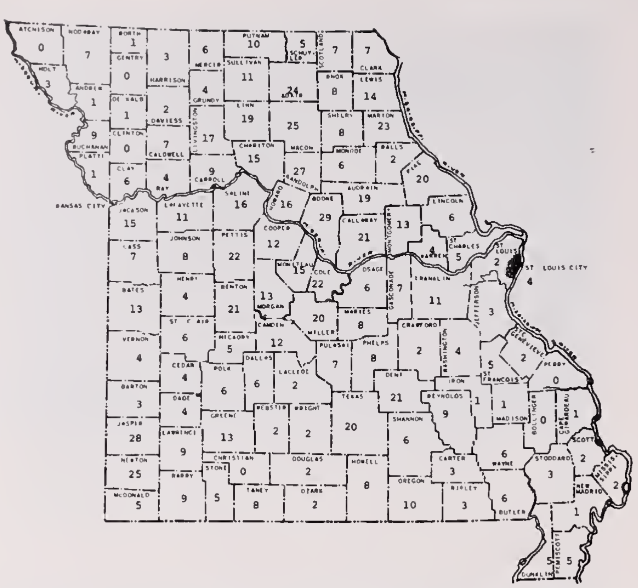

ATCHISON 0
NODAWAY 7
WORTH 1
GENTRY 0
HARRISON 3
MERCER 6
PUTNAM 10
SCHUYLER 5
SCOTLAND 7
CLARK 7
HOLT 3
ANDREW 1
DE KALB 1
DAVIESS 2
GRUNDY 4
SULLIVAN 11
ADAIR 24
KNOX 8
LEWIS 14
BUCHANAN 9
CLINTON 0
CALDWELL 7
LIVINGSTON 17
LINN 19
MACON 25
SHELBY 8
MARION 23
PLATTE 1
CLAY 6
RAY 4
CARROLL 9
CHARITON 15
RANDOLPH 27
MONROE 6
RALLS 2
PIKE 20
KANSAS CITY
JACKSON 15
LAFAYETTE 11
SALINE 16
HOWARD 16
BOONE 29
AUDRAIN 19
LINCOLN 6
CALLAWAY 21
MONTGOMERY 13
WARREN 4
ST CHARLES 5
ST LOUIS 2
ST LOUIS CITY 4
CASS 7
JOHNSON 8
PETTIS 22
COOPER 12
MONITEAU 15
COLE 22
OSAGE 6
GASCONADE 7
FRANKLIN 11
JEFFERSON 3
BATES 13
HENRY 4
BENTON 21
MORGAN 13
MILLER 20
MARIES 8
CRAWFORD 2
WASHINGTON 4
STE GENEVIEVE 2
ST CLAIR 6
HICKORY 5
CAMDEN 12
PULASKI 7
PHELPS 8
ST FRANCOIS 5
PERRY 0
VERNON 4
CEDAR 4
POLK 6
DALLAS 6
LACLEDE 2
DENT 21
IRON 1
BARTON 3
DADE 4
GREENE 13
WEBSTER 2
WRIGHT 2
TEXAS 20
SHANNON 6
REYNOLDS 9
MADISON 1
BOLLINGER 0
CAPE GIRARDEAU 1
JASPER 28
LAWRENCE 9
CHRISTIAN 0
DOUGLAS 2
HOWELL 8
CARTER 3
WAYNE 6
STODDARD 3
SCOTT 2
MISSISSIPPI 2
NEWTON 25
BARRY 9
STONE 5
TANEY 8
OZARK 2
OREGON 10
RIPLEY 3
BUTLER 6
NEW MADRID 1
McDONALD 5
PEMISCOTT 5
DUNKLIN 5
MISSISSIPPI RIVER
MISSOURI RIVER

Fig. 5 Geographic distribution per county of patients receiving radiation therapy at the Ellis Fischel State Cancer Hospital.

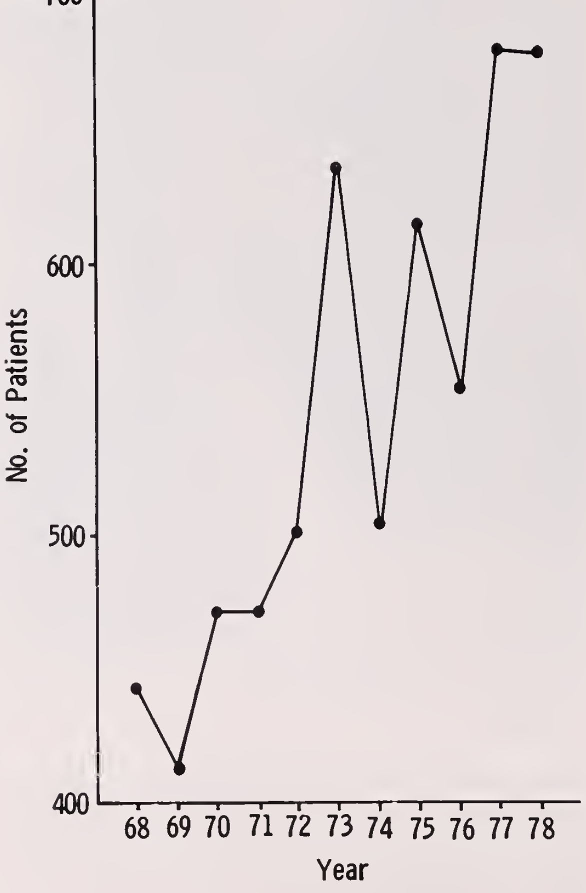


Fig. 6 Graph illustrates the increasing numbers of patients, over the past decade, who have received radiation therapy at the Ellis Fischel State Cancer Hospital.

an inpatient basis. The geographic distribution for 1978 is illustrated in Fig. 5. For those patients who can manage to be treated on an out-patient basis, social service helps to find local housing at reasonable rates. Fig. 6 is a tabulation of the increasing numbers of patients being treated.

Patient care by nurses, technologists and technicians over these past 40 years has been an especially heroic endeavor. All who come into contact with the patients seem to go the "extra mile" without being asked. Good oncology nurses, technologists and technicians are developed through years of experience and dedication to the cancer patient. Within the past few years, this department has trained radiation oncology nurses. They now participate in patient education, assist in treatment planning and help the physician with special procedures. Enterostomal therapists are also excellent resource people provided by the hospital.

EDUCATION AND TRAINING

Countless physicians have received part of their training in the Radiation Therapy Department, either through their medical school years at the University of Missouri, Washington University or St. Louis University or later as graduate physicians rotating through Ellis Fischel State Cancer Hospital. The multidisciplinary approach toward managing the patient always has been stressed. Dr. Fischel was capable of using both surgery and radium. He was Missouri's first surgical oncologist.

The Radiation Therapy Department chiefs were leading pioneers and teachers of the art. There have been only eight since 1940, and more than 80% ultimately have chaired departments in major teaching institutions over the nation. Dr. J. del Regato, director of radiation therapy from 1943-1949, in collaboration with Dr. L. Ackerman (former Ellis Fischel pathologist), published one of the most valuable textbooks entitled *Cancer*. It is now in its seventh edition. Dr. William Moss (1950-1953) wrote the classic textbook entitled *Therapeutic Radiology*, now *Radiation Oncology*, which is in its fifth edition. The others (Drs. Sala, Mercado, Perez-Tamayo and Canoy), who served as university department chairmen, have influenced and trained countless students.

The Radiation Therapy Department now has a staff of radiation oncologists, physicists, technologists and associated biologists who are approved by the American College of Radiology and the American Medical Association to provide a three-year residency program. The resident or fellow (clinical associate) receives a well-rounded education through multidisciplinary admitting clinics, treatment planning conferences with staff, surgical pathology conferences, weekly disease-oriented Saturday conferences and combined mortality conferences. The clinical associate cares for an inpatient census of 25 or more patients daily and is responsible for executing treatment plans through the various facilities. Interstitial therapy is an active and integral part of training, using radium implantation, direct iridium implants and permanent I-125 implants.

The department accepts medical students (third or fourth year) as clinical assistants. Their training stresses the clinical aspect, and they are responsible for the care of specified patients. Planning conferences, rounds, admitting clinic and follow-up clinic are included in their clinical experiences. Close affiliation and teaching efforts with the University of Missouri Radiation Therapy Department are fostered and encouraged.

Doing research on control and cure of cancers is not a small part of the Radiation Therapy Department's activities. This department is a member of three major research groups funded through the National Cancer Institute. In addition, research protocols designed by members of the EFSCH staff are conducted if they are approved by institutional peer review groups.

RESEARCH AND THE FUTURE

The Cancer Research Center was founded in 1963. Through this center and its basic science capability, the staff, fellows, residents and students now have supportive laboratory scientists for collaboration on special problems. Patients entering the Ellis Fischel State Cancer Hospital are filled with the hope and anticipation that this state-supported institution will help them. Their problems are usually varied and very complex, requiring a multidisciplinary approach to management. This challenges our staff to provide the best research efforts, competent specialists and latest technical facilities to provide the best possible treatment for their cancers, given with a warm, humane approach. Our hope is that we can continue to merit the confidence, trust and support of the medical professionals, Missouri citizens and government officials.

REFERENCES

1. Doyle, V. C.: History of the Ellis Fischel State Cancer Hospital, Columbia, Missouri, 1937-1944. Master's Thesis to the George Warren Brown School of Social Work, Washington University, St. Louis, Missouri, June 1946.
2. Fischel, E.: Radium and Internal Medicine. Ann. Clin. Med. 3:245-248, 1924.
3. Eberhard, T. P.: Special Article: The Ellis Fischel State Cancer Hospital. J. Mo. State Med. Assoc. 37:208-209, 1940.
4. Hoag, M. G.: The Follow-up of Patients at the Ellis Fischel State Cancer Hospital as Conducted by the Social Service Department. Mo. Med. 60:1128-1131, 1963.
5. Modlin, J.: Five Year Results of Cancer Treatment at the Ellis Fischel State Cancer Hospital: A Report to the Physicians of Missouri. J. Mo. State Med. Assoc. 46:485-488, 1949.
6. del Regato, J. A.: Integral Roentgen Therapy for Carcinoma of the Cervix Uteri. Am. J. Roentgenol. 71:676-681, 1954.
7. Sala, J. M. and del Regato, J. A.: Treatment of Carcinoma of the Endometrium. Radiology 79:12-17, 1962.

Reprints: C. E. Ridenhour, M.D.
Ellis Fischel State Cancer Hospital
115 Business 70 West
Columbia, MO 65201

"Every man who rises above the common level has received two educations: the first from his teachers; the second, more personal and important, from himself." — EDWARD GIBBON MEMOIRS, 1975.

WILLIAM D. JOHNSTON, M.D., EUGENE M. BRICKER, M.D.
and CARLOS PEREZ-MESA, M.D., *Columbia*

Total Pelvic Exenteration for Rectal Cancer

IS THERE A PLACE for total pelvic exenteration in the treatment of patients with rectal cancer? If so, what is its place and how is this possibility determined preoperatively and how is it confirmed intraoperatively?

MATERIALS AND METHODS

In an effort to answer these questions, we reviewed the experience with total pelvic exenteration for rectal cancer at the Ellis Fischel State Cancer Hospital over the ten-year period from 1960 through 1969.

During this time, 215 abdominoperineal resections were done for rectal cancer. During the same period, total pelvic exenteration was done in an attempt to cure advanced cancers of the rectum in 13 patients or 6% of the patients with operable low-lying rectal cancers (Table 1).

RESULTS

Three of these 13 patients did not survive the operative hospitalization, for an operative mortality rate of 23%. These patients were 80, 79 and 70 years of age and their causes of death were renal failure, pulmonary embolus and cardiac arrest (Table 2).

The five-year survival was 60% (six of ten) of those who survived the operation and subsequent hospitalization. Two patients died without documented recurrence and two patients died with documented recurrence before five years. The only local (pelvic) recurrence was in a woman who had a total pelvic exenteration with a right hemipelvectomy as an attempted salvage for a recurrent rectal cancer five years after an abdominoperineal resection. She died with a sacral recurrence three years and six months later.

Of the six five-year survivors, two remain alive and free of tumor over ten years postoperatively. Three of the six died of natural causes between five and ten years postoperatively at 70, 72 and 82 years of age, and one of the six died at five years and six months postoperatively with metastases to lung and bone (Table 3).

TABLE 1
TOTAL PELVIC EXENTERATION
FOR RECTAL CANCER
ELLIS FISCHEL STATE CANCER HOSPITAL
1960-1969

	No. of Cases
Total pelvic exenteration	13 (6%)
Abdominoperineal resections	215
	228

TABLE 2
TOTAL PELVIC EXENTERATION
FOR RECTAL CANCER
ELLIS FISCHEL STATE CANCER HOSPITAL
1960-1969

Operative Mortality (3 of 13 Patients) = 23%

Causes of Death		
Renal failure	Age 80	On 11th POD
Pulmonary embolus	Age 79	On 29th POD
Cardiac arrest	Age 70	Intraoperatively

DISCUSSION

During the ten years from 1960 through 1969, 13 patients with locally advanced rectal cancer had total pelvic exenteration in an attempt to cure their rectal cancers, while 215 patients were treated by abdominoperineal resections of the rectum. This means that 6% of the patients re-

TABLE 3
TOTAL PELVIC EXENTERATION
FOR RECTAL CANCER
ELLIS FISCHEL STATE CANCER HOSPITAL
1960-1969

Survival	
13 Patients	
3 Operative deaths	23%
6 Five-year survivors free of tumor 6/10	= 60%
2 Ten-year survivors free of tumor	
3 Died of natural causes after 5 years	
1 Died of lung and bone metastases after 5 years	
2 Patients died without documented recurrence	
2 Patients died with documented recurrence	
1) Abdominal spread with intestinal obstruction	
2) Sacral recurrence 3½ years postoperative	

ferred to Ellis Fischel Hospital during the 1960s with low-lying operable rectal cancers had a total pelvic exenteration for attempt at cure. We recognize that we see a selected group of patients since all of our patients come by physician referral. However, we do believe that a real, though small, percent of low-lying rectal cancers require a total pelvic exenteration for cure.

It is crucial that the possibility of the need for total pelvic exenteration be recognized preoperatively. The patient, then, may be prepared for this possibility. The surgeon, also, is not taken aback during the operation because the cancer is extensive and the patient needs a total pelvic exenteration for cure rather than a lesser, inadequate operation that the surgeon does because he has not prepared the patient for the possibility of removal of the urinary bladder.

The most frequent indication for total pelvic exenteration in men is anterior extension of the rectal cancer into or around the prostate gland or the perineal urethra or both and, in women, extension anteriorly and laterally about the vagina, which requires an excision of nearly all of the vagina. Even if this adequately removes the cancer, the problem of inadequate urinary bladder function is frequent after extensive posterior resections of rectal cancer, requiring a persistent indwelling urinary bladder catheter and resulting in recurring bouts of urinary tract infections. When the extent of the posterior resection indicates that the urinary bladder will not function properly postoperatively, we prefer to remove the bladder en bloc with the rectal cancer to better assure adequate surgical margins about the cancer and to prevent the problems of a denervated urinary bladder. Urinary diversion is created by using a segment of ileum as a conduit.

When rectal and vaginal examinations indicate anterior tumor extension, we follow the routine evaluation including barium enema and intravenous pyelogram with a cystogram and then a pelvic examination with the patient under anesthesia. Included are cystoscopy, bimanual vaginal and rectal examinations, and proctoscopy. The assessment of the anterior extension is critical. If the tumor is felt to be attached to the prostate gland or infiltrative about the perineal urethra, then total pelvic exenteration should be planned as a probability. The assessment of this anterior extension is aided by placing a urethral sound to palpate the exact relationship of the tumor to the perineal and prostatic urethra. In women, if the anterior lateral aspect of the lower vagina is infiltrated, then total pelvic exenteration should be planned as a probability.

Cancers may be cured by total pelvic exenteration in a few patients who have locally advanced rectal cancers with no hematogenous or lymphatic metastases. The need for exenteration must be recognized preoperatively, however, so that the patient and family are ready for adjustments and care that are necessary after the operation.

Dr. Johnston is Director of Surgery, Dr. Bricker is Associate Director of Surgery and Dr. Perez-Mesa is Chief Pathologist, Ellis Fischel State Cancer Hospital. All are senior scientists at the Cancer Research Center.

This investigation was supported in part by Grant No. CA 17946 from the National Cancer Institute, Department of Health, Education and Welfare.

Preoperative planning for total pelvic exenteration should include discussions with the patient and family concerning the magnitude of the operation to be done if operative findings indicate potential cure. These discussions should include the loss of the urinary bladder along with the rectum and in women, the loss of all the vagina, uterus, tubes and ovaries. Social workers help us to assess the home situation, including the support that is available from the family. We must know that the family members understand and accept this radical surgery and that they will support the patient when he or she returns home, giving assistance with perineal wound care and help with care of fecal and urinary stomas.

Preoperative preparation requires thorough instruction of the patient and family concerning fecal and urinary stomas to assure that these can be accepted by the patient and family and that they can manage these properly at home. They are assured of thorough instruction in stoma care postoperatively before the patient is discharged and they are given continuing assistance in stoma care in the lifetime follow-up of the patient. All of this is done preferably by a trained stomal therapist because of the expertise that is required and the great time commitment involved in order to care for these patients' stomas and to educate them properly in self-care.

With acceptance of patient and family and assurance of their ability to cope with the situation, the patient is physically readied for the operation. Preparation includes nutritional therapy, if the nutritional assessment indicates this need, bowel preparation and systemic support as indicated by preoperative medical evaluation.

The intraoperative assessment includes thorough exploration and biopsy of suspicious tissues for the possibility of metastatic cancer. If none is found, the pelvis is assessed by palpation and then by dissection. The dissection for total pelvic exenteration should be done outside the endopelvic fascia down to the levator floor anteriorly, laterally, and in the presacral plane posteriorly, leaving the ureters and internal iliac vessels intact. With dissection done in this manner, the potential curability of the cancer can be assured before commitment to total pelvic exenteration by transection of the ureters and the internal iliac vascular pedicle. This is essential since total pelvic exenteration for rectal cancer is not justified as a palliative procedure.

In our six patients who are long-term survivors, four had involvement beyond the muscular layers of the rectum but no lymph node metastasis (Dukes B) and only two had node metastasis (Dukes C). If rectal cancers have grown locally to the extent of requiring a total pelvic exenteration and if these cancers do not have any detectable metastatases, they seem to have a favorable biologic behavior. Sixty-six percent of patients who had extensive rectal cancers had no node metastases. The need, then, is for an operation that is adequate for local control. This control was accomplished for all of these patients with the exception of one patient who died of a sacral recurrence. For this patient, the operation was a salvage attempt for control of recurrent rectal cancer.

Study of this series of patients emphasizes the point made by Spratt and Spjut based on their review of the 1,137 consecutive patients treated at the Ellis Fischel State Cancer Hospital for colorectal cancer between 1940 and 1961:[1] there is a biological variant of colorectal carcinoma that does not metastasize to lymph nodes regardless of the size of the primary cancer. Thus, any large colorectal cancer that can be mobilized with adequate surgical margins should be resected unless there is unequivocal evidence of metastases outside of the surgical field.

SUMMARY

There is a small but real portion of patients with rectal cancer that is locally advanced but without hematogenous or lymphatic metastases. With proper preoperative and intraoperative evaluation, these patients can be selected for and cured by total pelvic exenteration but not by abdominoperineal resection of the rectum. The possibility of this need for total pelvic exenteration must be recognized preoperatively so the patient and family can be prepared for the adjustments and care that are necessary postoperatively.

REFERENCE

1. Spratt, J. S. Jr. and Spjut, H. J.: Prevalence and Prognosis of Individual Clinical and Pathologic Variables Associated with Colorectal Carcinoma. Cancer 20:1976-1985, 1967.

Reprints: *William D. Johnston, M.D.*
Ellis Fischel State Cancer Hospital
115 Business 70 West
Columbia, MO 65201

"It (the State) has taken on a vast mass of new duties and responsibilities; it has spread out its powers until they penetrate to every act of the citizen, however secret; it has begun to throw around its operations the high dignity and impeccability of a State religion; its agents become a separate and superior caste, with authority to bind and loose, and their thumbs in every pot. But it still remains, as it was in the beginning, the common enemy of all well-disposed, industrious and decent men." — H. L. MENCKEN

LARRY L. DOSS, M.D., *Columbia*

Radiation Therapy in Malignant Melanoma

In the United States, malignant melanoma has the reputation of being resistant to radiation therapy. European radiotherapists, however, have shown that there are numerous potentially useful roles for consistently effective radiation regimes.

Dr. Doss is Acting Director of Radiation Therapy, Ellis Fischel State Cancer Hospital and Assistant Scientist, Cancer Research Center.

This investigation was supported in part by Grants No. CA 22486 and CA 17946 from the National Cancer Institute, Department of Health, Education and Welfare.

MALIGNANT MELANOMA has the reputation of being radioresistant or, at best, of variable radioresponsiveness. Because of this, primary lesions are seldom treated with radiotherapy in the United States. However, the radiotherapist is often asked to consider giving palliative treatment for metastases from melanoma. Such experience has shown this tumor's response to be a function of individual treatment dose, which gives us an insight into the unique radiobiology of melanomas.

European radiotherapists traditionally have used high total-treatment dosages in the immediate area of the lesion with daily dose increments varying from 400 to 600 rads. The "margin at risk" peripheral to the primary lesion has been given lower total dosages with daily dose fractions ranging from 200 to 800 rads. Such aggressive therapy has produced the results indicated in Tables 1, 2 and 3.[1] Radical radiotherapy results such as these produced five-year survival statistics similar to those quoted in the United States when radical surgery is used for control of the primary cancer.[2]

Surgery for metastatic disease is indicated only in local regional spread, i.e., to lymph nodes or in the case of solitary metastasis. Radiotherapy or chemotherapy has been used in all other instances of metastases. Consistent control of metastases by radiotherapy remained an enigma until 1971 when Barranco, Romsdahl and Humphrey dem-

TABLE 1
MALIGNANT MELANOMAS TREATED AT THE UNIVERSITY OF ROENTGEN INSTITUTE, FRANKFURT, WEST GERMANY, 1935-1960

342 malignant melanomas treated with radiation
259 available for 5-year analysis

176/259 = 68% histologically proved
83/259 = 32% diagnosed clinically only

TABLE 2
SURVIVAL RATES OF MALIGNANT MELANOMAS TREATED WITH RADIATION

	5-Year Survival	*10-Year Survival*
All malignant melanomas	125/259 = 48%	34/117 = 29%
M M without metastases	103/165 = 62%	28/66 = 42%
M M with metastases	22/94 = 23%	6/51 = 12%

M M = malignant melanoma.

TABLE 3
FIVE/YEAR SURVIVAL RATES OF MALIGNANT MELANOMAS ACCORDING TO METHOD OF TREATMENT

	Radiation Therapy Only	*Local Excision Followed by Radiation Therapy*	*Radiation Therapy Followed by Local Excision*
All malignant melanomas	70/113 = 62%	55/146 = 38%	6/7 = 86%
Without metastases	65/95 = 68%	38/70 = 54%	6/7 = 86%
With metastases	5/18 = 28%	17/76 = 22%	0/7 = —

TABLE 4*

RESPONSE OF SKIN METASTASES BY MAXIMUM INDIVIDUAL TREATMENT DOSE

Individual Treatment Dose (Rads)	*No. Response/No. Lesions*
200-300	0/5
301-400	0/4
401-500	0/2
600	9/11
601-700	5/5
701-800	2/2
1,000	1/2
1,200	1/2
2,000	10/10
3,000	1/1
Total	29/44

* Alterations in Tables 4 and 5 made with permission from the authors. (See Reference #6.)

onstrated "radioresistance" of human melanoma cell lines grown in vitro.[3] Such resistance resulted from the unusually large Dq (shoulder) on the radiation cell survival curve for melanoma (Fig. 1).

The "shoulder" represented dosage wasted before actual cell killing began. With such a wide shoulder, traditional radiotherapeutic fraction regimens are of little benefit. These findings suggested that malignant melanoma would best be treated by using a schedule of relatively few but high-dose, individual treatments. Confirmation of this hypothesis came from the radiobiologists with the demonstration of superoxide dismutase in melanin.[4] Superoxide dismutase occurs at high levels in melanin granules, where it scavenges and neutralizes the free radicals deposited by ionizing radiations.[5] With such an enzyme present in the tumor, massive single doses would have to be given to counter the loss of free radicals.

Using this rationale, Habermalz and Fischer conducted a prospective clinical trial on dose response in melanoma. They found a striking correlation of response with individual treatment dose (Table 4).[6] None of 11 lesions treated with individual doses of 500 rads or less showed any response despite high total treatment dosages. There appeared to be a "threshold" level of approximately 600 rads per individual dose necessary to cause response. In all 44 lesions treated, there was no correlation between probability of tumor response and total dose (Table 5).[6]

This report prompted a retrospective survey by Hornsey of the dose response relationship in melanoma.[7] Using combined data from the United Kingdom and Australia, Hornsey found that at around 400 to 800 rads per fraction, the responses were statistically more frequent. She also confirmed that the total dose was not the significant factor in initiating tumor response (Table 6).[7] Rather, it was the use of high-dose treatment fractions. The combination of Hornsey's data with that of Habermalz and Fischer shows that the superiority of such regimens is statistically significant (Table 7).[6, 7] Addi-

TABLE 5*
RESPONSE OF SKIN METASTASES BY TOTAL DOSE

Total Dose (Rads)	*No. Responses/No. Lesions*
1,000-2,000	12/19
2,001-3,000	3/6
3,001-4,000	3/3
4,001-5,000	3/6
5,001-6,000	8/9
6,001-7,000	0/1
Total	29/44

* Alterations in Tables 4 and 5 made with permission from the authors. (See Reference #6.)

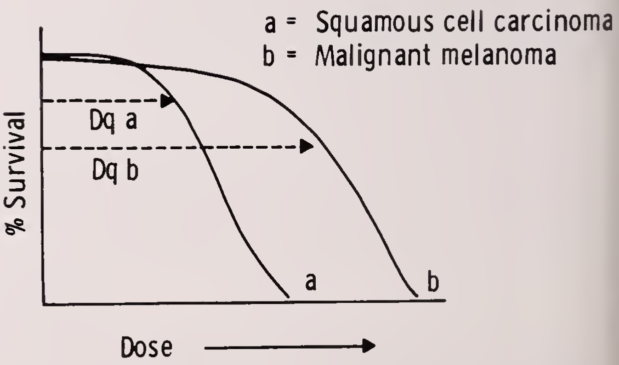


Fig. 1 Quasi-threshold (Dq) is represented by a shoulder on the cell survival curve. The Dq of melanoma is much larger than that for squamous cell carcinoma.

TABLE 6
RESPONSE AS A FUNCTION OF TOTAL DOSE

Total Dose (Rad)	*Total Tumors*	*Good or Some Response*
1,400-2,500	12	7-54%
2,500-3,500	7	4-57%
3,500-4,500	18	13-72%
Over 4,500	14	9-64%

TABLE 7

Combined Habermalz + Hornsey		2-4 Gy vs 4-8 Gy*	
Response	*No*	*Yes*	*Total*
Grays			
2-4	44	22	66
4-8	21	36	57
Total	65	58	123

* Gy = Gray, 100 rads = 1 Gy P = 0.002 (corrected X^2)

tionally, Hornsey observed that there seems to be a balance, in the range of six to ten fractions of 500 to 600 rads each when the damage to the tumor is greater than that to normal tissues.[7] Such normal tissue sensitivity must be critically considered before instituting high individual fraction therapy.

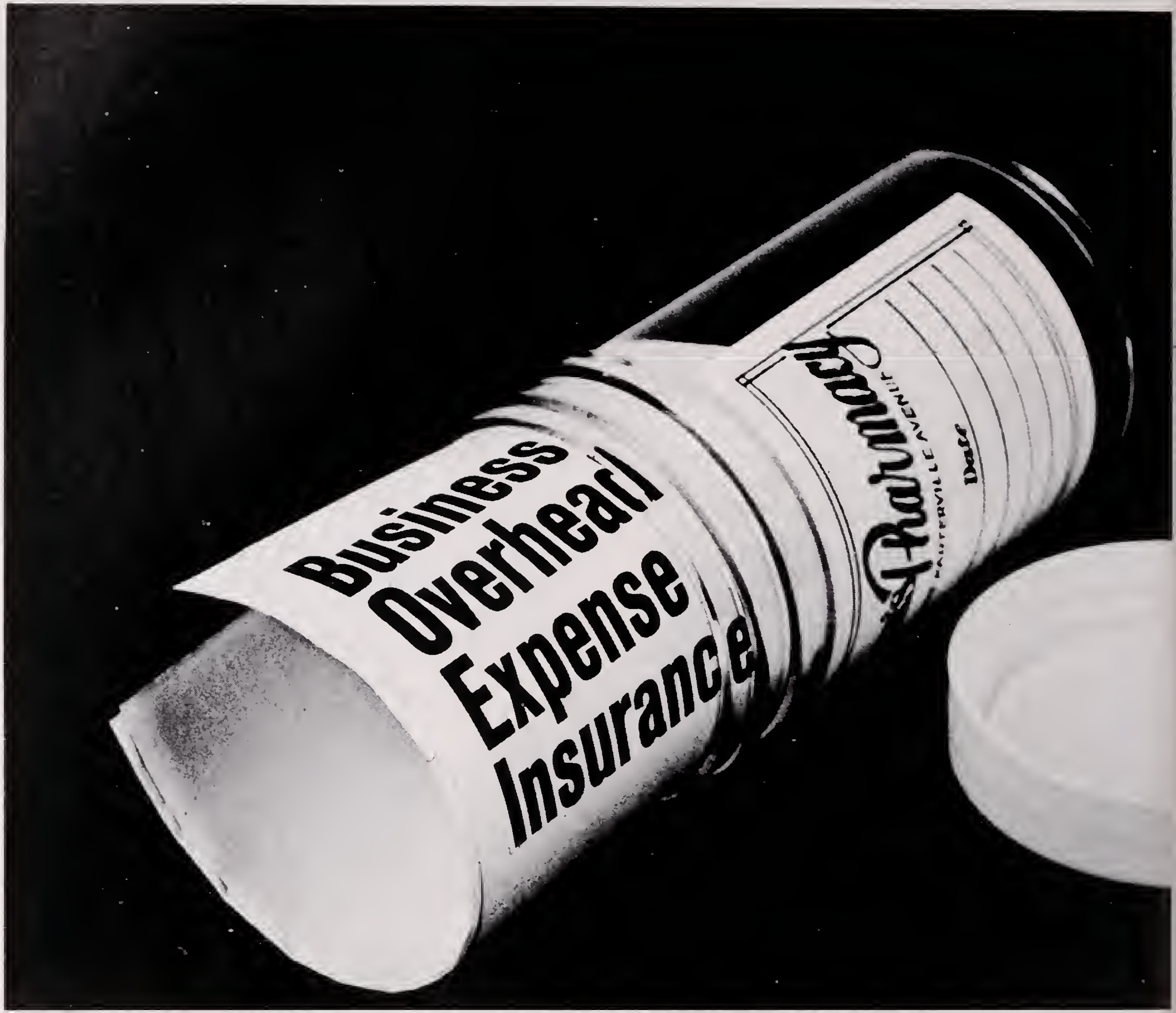
Potentially useful roles for consistently effective radiation regimens are numerous. Treatment of primary lesions about the head and neck, where surgery is disfiguring or technically difficult or both, could be obviated. Sterilization of a subclinical tumor by prophylactic, local and regional lymph-node irradiation should be put to a clinical trial. Last, prevention of dissemination during resection of melanoma perhaps could be avoided by preoperative irradiation with dosages tailored to the tumor.

References

1. Hellreigel, W.: Radiation Therapy of Primary and Metastatic Melanoma. Ann. N.Y. Acad. Sci. 100:131-141, 1963.
2. Balch, C. M., Soong, S. J., Murad, T. M., Ingalls, A. L. and Maddox, W. A.. A Multifactorial Analysis of Melanoma. Surgery 86:343-351, 1979.
3. Barranco, S. C., Romsdahl, M. M. and Humphrey, R. M.. The Radiation Response of Human Malignant Melanoma Cells Grown In Vitro. Cancer Res. 31:830-833, 1971.
4. Goodchild, N.: Personal communication, Oct. 25, 1978.
5. McCord, J. M. and Fridovich, I.: The Biology and Pathology of Oxygen Radicals. Ann. Intern. Med. 89:122-127, 1978.
6. Habermalz, H. J. and Fischer, J. J.: Radiation Therapy of Malignant Melanoma. Experience with High Individual Doses. Cancer 38:2258-2262, 1976.
7. Hornsey, S.: The Relationship Between Total Dose, Number of Fractions and Fraction Size in the Response of Malignant Melanoma in Patients. Br. J. Radiol. 51:905-909, 1978.

Reprints: Larry L. Doss, M.D.
Ellis Fischel State Cancer Hospital
115 Business 70 West
Columbia, MO 65201

A blue ribbon panel of physicians and other scientists was proposed by the AMA to help the government avoid scientific pitfalls in the identification and evaluation of carcinogens. In a letter to the Interagency Regulatory Liaison Group, the AMA said the panel would "design, implement and oversee this nation's scientific inquiries into the myriad of unknowns in the human carcinogenesis problem." It would be drawn from all sectors of the medical and scientific community and would operate under the auspices of an independent entity such as the National Academy of Sciences. The AMA also recommended that IRLG expand its scientific peer review by submitting information to concerned professions for comment before accepting regulatory action, by seeking publication of all data in scientific journals, and by lengthening comment periods on regulation proposals published in the *Federal Register*.



A sure-fire cure.

Your office overhead expenses continue on when you are disabled and income production stops. Continuing salaries, rent, professional services, utilities, insurance, and taxes can make your accounts receivable income vanish quickly.

The best prescription is **Overhead Expense Disability Insurance** which will help pay those continuing expenses.

Your **Missouri State Medical Association** sponsored Plan is designed especially to provide this protection for you. Up to $3,000.00 monthly benefit is available.

For costs and further details of the coverage, including exclusions, limitations and the terms under which the policy may be continued in force, contact your administrator.

administered by

Underwritten by Commercial Insurance Company, Newark, New Jersey

Fred S. James & Co. of Missouri, Inc.

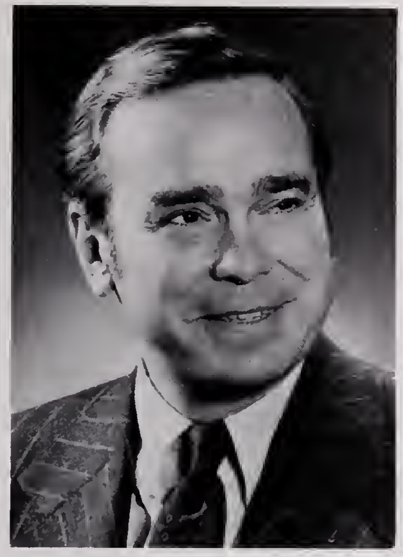
James

Western Missouri Administrator
2 Crown Center • 2420 Pershing Rd.
Kansas City, Mo. 64108
(816) 842-6670

Eastern Missouri Administrator
1015 Locust Street • Suite 828
Saint Louis, Missouri 63101
(314) 421-1838

President's Message

By the time this page is published, the Interim Session of the AMA House of Delegates will have been held in Honolulu. A proposed new code of medical ethics will have been considered and the input of the MSMA House of Delegates on this document will have been received. The MSMA House disapproved the proposed changes and, instead, adopted a motion that "the Missouri Delegation be instructed to continue the present AMA Principles of Medical Ethics insofar as is possible." The chairman of the AMA Ad Hoc Committee on the Principles of Medical Ethics, which proposed the new code, is James S. Todd, M.D. of New Jersey. Dr. Todd is running for the AMA Board of Trustees in the election next July.


Andrew McCanse, M.D.

Without representing myself as an expert, I have made some observations about how the AMA works, based on attendance at the last two sessions of the House of Delegates. There are 277 members of the AMA House of whom 57 are from recognized national specialty societies. The state delegations range in size from 18 one-member delegations to the 22-member California delegation. The Board of Trustees is composed of 15 physicians counting the president-elect, president and immediate past-president of the AMA, all of whom are from different states. Dr. Hubert Ritter is Missouri's member of the Board. The eight councils, some of which are elected, are composed of a variety of members holding about 75 positions. None are from Missouri. The various committees are appointed by the Board of Trustees, frequently after input from the involved councils. None are from Missouri.

Missouri has four AMA Delegates and four alternate delegates, all of whom attend each session of the House of Delegates. The usual work schedule for the Missouri group is to caucus the day before the first session of the House to go over all of the material in the Delegates' Handbook and discuss the various issues to be considered in the reference committees. Each member of the Missouri delegation, including the president and president-elect of the MSMA, is assigned to one of the reference committees in order to give a report to the next caucus of the Missouri delegation.

In the last session, Missouri held its caucuses with delegates from five or six other midwestern states with the hope that a unified stand on some issues might enhance the importance of all of these delegations. Dr. Rae Froelich from Missouri was elected chairman of this Mid-America Caucus with the understanding that the chairmanship will rotate among the states. The MSMA has the largest delegation in this caucus.

In addition, the MSMA has three additional alternate delegates to the AMA. They are Drs. William J. Medlicott, R. Don Blim and R. R. Hannas. Each of these physicians represents a specialty society in the House. They attend the Missouri delegation caucuses when there is no other conflict in scheduling.

The president and president-elect of the MSMA function in a largely social capacity. When the MSMA has a candidate running for office, there is a hospitality room which is hosted by delegation members and the staff, including their wives. It is also considered advantageous for all of these people to visit other hospitality rooms and special lunch functions to help represent the delegation.

There are 45 members on the nine reference committees. One is from Missouri . . . Dr. Melvin Kasten.

In some of the larger states, it is customary for the president of the state association to lead the delegation, make formal written presentations to the reference committees and, if the president is also a delegate, to participate in the floor debate. Under such a system, the strength of that state's argument is increased, since the delegates recognize that the president of the state association speaks on behalf of all of their physician members.

Missouri submitted the name of Dr. George Ladyman for membership on the AMA Committee on Accreditation of Continuing Medical Education along with several alternate names for the Board of Trustees of AMA to consider. Dr. Ladyman has done outstanding work as chairman of the MSMA Commission on Continuing Education and Health Manpower and is eminently qualified to serve on the AMA Committee. Nevertheless, Missouri was turned down. When I asked one candidate for AMA president-elect about this, he responded that the Board of Trustees took the recommendations of the Council of Medical Education in making their selection. Apparently, that Council wasn't too familiar with the continuing education work of a radiologist from Poplar Bluff, Mo. There was room for 24 members on that committee.

We can take a great deal of pride in having Dr. Ritter on the Board of Trustees. We can also be proud of Drs. Froelich, Kasten, Lieb and Slickman, our delegates, and Drs. Balster, Bohigian, Bowles and Stephenson, our alternate delegates. All of these physicians work very hard to assure that Missouri is well represented in the AMA.

But if we look carefully at the influence Missouri has in the affairs of the AMA, we can see that we have a long way to go. We trust that our colleagues in the hierarchy of the AMA will begin to show the "show me" state that they consider us to be a more necessary participating part of the federation.

FOUNDED 1924
AUXILIARY TO THE MISSOURI STATE MEDICAL ASSN.

MSMA
Auxiliary

For You at Christmas

Mrs. Rudy Ruhling
President

CHRISTMAS PEACE

By
Dorothy M. Cahoon

A shining rainbow arched above
The planet earth tonight,
Illumined by the Star of Love,
The Holy Christmas Light;
The magic span invisible
Unites the hearts of men,
And the sound of angel music
Floats down to earth again:

Peace on earth, goodwill to all,
We hear the sweet refrain,
It makes the troubled heart rejoice
And brings surcease to pain;
Oh, Holy One, put out the flame
Of hate that burns so bright,
And in its ashes plant Thy Rose
Of Christmas Peace tonight!

The MSMA Auxiliary extends

Season's Greetings and Best Wishes
for a
Healthy, Happy New Year

EDITORIALS

MY BROTHER'S KEEPER

DONALD E. McINTOSH, M.D., President
Jackson County Medical Society

Because of the concern of its members for the "sick doctor," the Jackson County Medical Society sponsored a resolution calling for creation of an Impaired Physicians Committee within the Missouri State Medical Association. The resolution was adopted at the April, 1977 meeting of the MSMA House of Delegates. At the request of the president of the Association, I have had the privilege of chairing that Committee for the past two years.

From the outset, members of the Committee have seen its function as an advocate, protector and helper of the impaired physician with the vision of aiding and assisting him or her to restoration of his or her well-being and to aid him or her to maintain or reenter full productive practice. The Committee uses whatever professionally acceptable means might be appropriate for a given case. At all times, this is to be done with charity and compassion and in strict confidence.

A "hot line" telephone number has been established and well advertised. To avoid malicious and spurious referrals, only those are accepted in which the caller is willing to identify himself or herself by name and address. The names of physicians who are referred to the Committee are unknown to Committee members except for the one member who assumes responsibility for supervision of that particular case. All records of referred individuals are destroyed after they have successfully completed one year's supervision or treatment of their behavior and practice. This confidentiality would be broken only when the physician's behavior might become a threat to his or her own well-being or that of society. The program is bound to have a positive social impact at a time when consumerism frequently accuses us of not "policing" our ranks and failing to protect patients from impaired physicians.

A number of recent happenings have caused us concern. The Council of the MSMA has decided that unethical or incompetent accusations fall outside the domain of the Committee. The Council has reserved to itself the right to hear and adjudicate all such matters. Therefore, the Impaired Physicians Committee will not be able to intercede and assist the wayward physician in any way if his conduct has been construed to be unethical or incompetent. Unfortunately, no guidelines are set as to how to differentiate between "sick" behavior and unethical behavior. It is hoped that the greyness in this area does not result in total inactivity.

Although members of the Missouri Psychiatric Association have stepped forward and provided us a list of physicians who would be willing to serve as confronters who will deal directly with impaired physicians, we are disappointed that none of the other specialties have responded. Where are the dermatologists, surgeons, internists, etc. who could offer so much in this effort to help their sick colleagues? To encourage other physicians to volunteer, the Committee is working on a program on "Confrontation" which we hope to offer at the next Annual Session of the MSMA.

Finally, in the past few weeks we have received sad information on three physicians, all of whom had been demonstrating problems over a period of time but who had not been referred to the Committee. The first individual, whose aberrant behavior had been noted officially, apparently took his own life before any effort was made to help him. The other two physicians became police and judiciary problems and, therefore, are beyond the help which their colleagues might have provided. Statistically, if these physicians had been referred to the Committee earlier, at least two of them might now be functioning adequately and competently in their professional and personal lives. Now, all are probably lost. We can only speculate why some colleague did not step in and refer them. The real reasons we will never know.

Father Flannigan popularized the statement: "He ain't heavy, Father, he's my brother!" We hope the addition of an "M.D." to the name of our brother or sister does not make them so heavy that when their personal and professional lives begin to deteriorate we cannot reach out and offer a loving and compassionate hand.

—Reprinted from *The Greater Kansas City Medical Bulletin*, October, 1979

WHEN A DOCTOR NEEDS A DOCTOR

The official publication of the Jackson County Medical Society recently discussed the "sick doctor" and efforts by the Missouri State Medical Association to provide assistance through its Impaired Physicians Committee.

If the idea of a doctor troubled with emotional or physical problems needing help is disturbing, it shouldn't be. The notion that physicians stand above the range of ordinary weaknesses and limitations contributes to their problems and those of their patients, especially when patients' larger-than-life view of doctors inhibits necessary communication in professional situations. Placing high demands on themselves, many physicians drive excessively hard to meet those standards: society is a co-conspirator in insisting that its doctors be perfect.

Estimates provided by the American Medical Association in 1977 in preparation for establishing the special MSMA committee indicated there were some 17,000 doctors in the nation impaired by alcoholism, drug abuse and potential for suicide. Certainly they are a minority, but it is a frightening figure just from the perspective of the wasted abilities, talents and skills of very bright and well-educated individuals caught in the web of mortality.

The medical organization's aim of helping those persons maintain or return to a full-time productive professional life also assures accountability to patients rightfully expecting quality care. The committee has a hot line to accept referrals from doctors taken only if the caller will identify himself or herself by name and address. But to be workable, it needs people. Concerned colleagues have to make that call to get the help started if the good system is to reach the doctor in need. Dr. Donald E. McIntosh, Jackson County Medical Society president and head of the Impaired Physicians Committee, laments that physicians don't make full use of it. He cited as an example three physicians "all of whom had been demonstrating problems over a period of time" who are now beyond the scope of the committee as a result of death or intervention of the legal system.

Dr. McIntosh looks at such actions as a proper helping hand to a brother or sister in need. We can only underline the physician's plea for compassionate involvement. And add to it a suggestion that every patient examine conscious or subconscious attitudes and expectations about his or her physician. Perhaps if doctors are "allowed" to have ordinary human problems, making those necessary steps toward seeking help and using it won't seem so overwhelming.

—Reprinted with permission from the *Kansas City Times*, Oct. 23, 1979

In Memoriam

Ray David Williams, M.D., 114 N. Taylor Ave., St. Louis 63108; a graduate of Washington University, 1937; member of St. Louis Metropolitan Medical Society; age 72; died Oct. 21, 1979.

Kenneth A. Davis, M.D., 3228 Euclid, Kansas City 64109; a graduate of the University of Kansas, 1927; member of Jackson County Medical Society; age 81; died Oct. 26, 1979.

WELCH ALLYN WALL UNIT

The new 3.5v. Halogen wall transformer unit with Fiber Optic Pneumatic Otoscope and Opthalmoscope, one of the complete line of WELCH ALLYN diagnostic equipment currently in stock for immediate delivery.

to arrange a demonstration in your office contact your local Goetze-Niemer salesman or call

The GOETZE-NIEMER Co.
1701 Brooklyn, K.C., MO. 816-231-1900
serving the Midwest since 1884

MSMA Members Receive Physician's Recognition Award

Sixty-four MSMA members qualified for the MSMA-AMA Physician's Recognition Award during the period Sept. 12-Oct. 30, 1979.

The award is a voluntary continuing medical education (CME) program designed to improve physician competence and recognize physicians who earn it by completing the educational requirements.

To qualify, each physician must accumulate 150 credit hours of CME within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Names of additional PRA recipients will be published in Missouri Medicine as they are received from the AMA.

Mohammed Al-Aly, Clayton
David O. Allen, Joplin
William E. Allen, St. Louis
Adelaida Almeda-Temporal, St. Louis
Thomas R. Anderson, Columbia
Mohammad Asghar, St. Louis
Charles J. Ash, Springfield
Patricio C. Avila, Hannibal
John D. Bauer, St. Louis
Gerard H. Berndsen, St. Louis
Joseph L. Bizek, Aurora
Robert E. Bolinske, St. Louis
John E. Burch, Joplin
Albert J. Campbell, Sedalia
James E. Carter, Kansas City
Barry J. Cooper, St. Louis
Ralph Copp, St. Louis
Joseph A. Costrino, St. Louis
William S. Coxe, St. Louis
Walter C. Dandridge, Joplin
David Davis, Columbia
Fernando Del Valle, St. Louis
George D. Dixon, Kansas City
John R. Dixon, Brookfield
Gary A. Dyer, St. Joseph
Boonmee Enkvetchakul, Springfield
Jhonson E. Flores, Creve Coeur
Albert L. Folkner, Warrensburg
Samuel L. Gaston, Joplin
John M. Haight, Kansas City
Wyeth Hamlin, Hannibal
Bruce J. Hookerman, Bridgeton
Warren L. Johnson, Kansas City
Juan Kang, Ballwin
Theodore C. Kiekhaefer, St. Joseph
William W. Kim, St. Louis
Eustace E. King, Ferguson
Thomas W. Kobbermann, Columbia
Felix F. Larocca, St. Louis
Frank B. Long, St. Louis
Thomas M. Macdonnell, Marshfield
Laureano G. Mayuga, Cabool
Julio Morales, St. Louis
Alan D. Morris, Columbia
Thanh-Huong T. Nguyen, Kansas City
Frank Paletta, St. Louis
Michael C. Perry, Columbia
Armando B. Ponce, Fulton
Arthur L. Prensky, St. Louis
Joe L. Rector, Kansas City
Robert E. Ryan, St. Louis
Paul E. Sauer, Springfield
Luis H. Schwarz, St. Louis
Ponnuru Seshumurty, Kansas City
G. Donald Shull, Jefferson City
Donald M. Spencer, Kansas City
Maxwell W. Steel, Kansas City
Thomas R. Thale, St. Louis
Houshang Vafi, St. Louis
Salvador Valera, St. Joseph
Sittichai Vongsnichakul, St. Louis
James R. Waltz, Kearney
Jack N. Wiles, West Plains
Charles A. Worley, Sweet Springs

in Brief

A summary of AMA, medical & health news

American Medical Association / 535 North Dearborn Street / Chicago, Illinois 60610 / Phone (312) 527-1500 / TWX 910-221-0300

DISCUSSIONS WITH THE AMA WILL CONTINUE, and increase if necessary, HEW Secretary Patricia Harris told AMA officials at a meeting in Washington. She said there were obvious areas of disagreement, "but we will seek areas of agreement." She also said the role of Assistant HEW Secretary for Health Julius Richmond, M.D., will be magnified under the new leadership. A major item on the agenda was the medical manpower bill the Administration is preparing to replace the program scheduled to expire next year. AMA officials noted the increase in the number of medical schools and graduates, and they pointed to the shift in residency training from specialization to primary care. In a discussion of cost containment, the AMA outlined its position of opposition to the Administration's hospital controls plan.

AN ACTION PROGRAM involving the business community and local medical societies is being discussed at a new series of meetings between corporate leaders and AMA officials. The meetings are an outgrowth of an AMA program which, over the past two years, has taken AMA officers to the headquarters of more than 75 leading firms to get management views on health care problems and to familiarize business leaders with recommendations of the National Commission on the Cost of Medical Care. During its corporate visits, the AMA learned that quality of health care doesn't seem to be a problem. In addition to the problem of cost, there are problems related to access, availability, employee time loss and rehabilitation.

THE AMA'S NEW AD HOC COMMITTEE on Women Physicians in Organized Medicine will meet for the first time on November 9 at AMA Headquarters. The committee will develop specific recommendations and mechanisms to insure the involvement of women physicians at all levels of organized medicine. Patricia J. Stuff, M.D., of Bonduel, Wis., is chairwoman.

THE AMA JAIL HEALTH PROJECT resulted in a 70% increase in the overall availability of seven of the most important health care services, according to a status report on the first phase of the program. During this three-year period, standards were developed and accreditation procedures established. Among the changes in jail health care following implementation of the AMA standards was a fourfold improvement in early detection of illness, including communicable diseases, through screening of inmates on admission followed by full physical examination. The second stage of the AMA project, now underway, aims at widespread implementation of the AMA standards. Approximately 350 jails will be involved in 22 states and Puerto Rico.

SCARCE FEDERAL DOLLARS should be spent to provide services to people with serious mental illness rather than to maintain planners, statisticians and administrators, the AMA told Congress in a statement urging rejection of the Administration's Mental Health Systems Act. The bill, now before the Senate Human Resources Subcommittee on Health, would largely replace the Community Mental Health Centers Act as the major program funding mental health services. The bill "does not do justice to our seriously mentally ill," the AMA said, and it does not remedy the problems of the existing community mental health centers program. The AMA outlined six principles for a future federal program and offered to work with the subcommittee in developing legislation.

THE SIXTH AMA STATE HEALTH Legislation Meeting will be held Jan. 3-5, 1980 in Phoenix, Ariz. The meeting, which will include an overview of recent state health legislation, is designed for medical society executives and officers, government relations personnel, lobbyists, legal counsel, physician members of state and specialty society legislative committees and state legislators. More information is available from the Department of Legislation, AMA Headquarters.

Merry Christmas

and

Happy New Year

from

*Medical Defense
Associates,
Ltd.*

May you have a prosperous New Year

with the savings in our

Medical Malpractice premiums.

For additional information please call or write:
MISSOURI MALPRACTICE MANAGERS, 3444-P S. Campbell, Springfield, Missouri 65807
Phone 1-800-492-7212 or (417) 883-0199

NEWS

From the Medical Schools

ST. LOUIS UNIVERSITY

"Health Care in the '80s — Getting It Together," this year's Medical Center and community conference, drew business, consumer, economic, federal, labor and medical experts from across the country to expound on the problems, alternatives and solutions in health care delivery over the next decade.

More than 150 St. Louis area business and industrial leaders participated in the event. Focus was on how technological advances, governmental regulations and changes of allocations would affect every community and how both health care delivery providers and users would react to these changes.

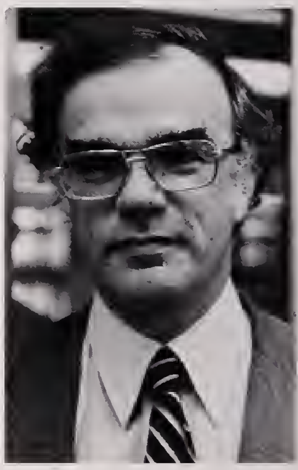
Ronald J. Auclair, M.D., assistant clinical professor of medicine, has been elected president of the St. Louis University Hospitals Medical and Dental Staff. He succeeds *R. William Burmeister*, M.D., assistant professor of internal medicine.

Other newly elected officers are *John J. Purcell*, M.D., assistant professor of ophthalmology, vice-president, and *Thomas J. Donovan*, M.D., assistant clinical professor of otolaryngology, secretary-treasurer.

R. William Burmeister, M.D., at left, passes the gavel to his successor, Ronald J. Auclair, M.D.

The new officers, who will serve one-year terms, must be members of the School of Medicine faculty as well as active members of the University Hospitals staff.

Raymond G. Slavin, M.D., professor of internal medicine and director of the Division of Allergy and Immunology, will collaborate with *John Mullins*, Ph.D. of Wales in a study of allergic pulmonary aspergillosis, a hypersensitivity disease of the lung due to a commonly encountered fungus, aspergillus fumigatus. The study is being funded by a #58,025 grant from the National Institute of Occupational Safety and Health.



Dr. Slavin

Dr. Mullin is participating in the study because the disease is much more common in the United Kingdom. He spent six weeks in Dr. Slavin's laboratory. During the next year, he will be doing his work in Sully Hospital in Penarth, Wales.

The investigators will study the elements contributing to the occurrence of the disease as well as attempt to establish an animal model of allergic aspergillosis in non-human primates. By appropriate immunization, lung changes have been produced in the monkey similar to those found in humans with allergic aspergillosis. This will enable Drs. Slavin and Mullin to study inflammatory response by removing and examining tissues from the affected lung. If not properly diagnosed in its early stages, aspergillosis can result in severe pulmonary disability.

The Medical School's renowned allergologist recently attended the 10th International Congress of Allergology in Jerusalem. While at the conference he reported on a new cortisone spray for bronchial asthma, the result of coordinated research from St. Louis University and the Universities of Wisconsin, Minnesota and Cincinnati.

William J. Longmore, Ph.D., professor of biochemistry, has been appointed to a four-year term to the Human Embryology and Development Section of the National Institutes of Health. The section reviews grants and assigns priorities to grant applications. Dr. Longmore received the assignment primarily because of his research in the investigations of fetal and neonatal lung development and disease.

UNIVERSITY OF MISSOURI-KANSAS CITY

The University of Missouri-Kansas City (UMKC) has been awarded a three-year grant from the Department of HEW to develop geriatric teaching modules that will give quality to its own efforts in geriatric medical education and which could be made available for the facilitation of such education in other schools. The four courses for which these modules will be developed are "Fundamentals of Geriatrics" and "Clinical Geriatrics" for medical students, "Long-Weekend Geriatric Workshops" and "Geriatric Health Care Systems" for interdisciplinary groups of students in medicine, dentistry and pharmacy.

This three-year grant parallels the goal of the Medical School to significant allocation of University resources in support of the grant objectives.

The geriatric programs of the Medical School and its primary teaching hospitals, Truman Medical Center-West and -East, have been developed and will continue to develop in collaboration with the Joint Centers for Aging Studies, University of Missouri and the Commission on Aging of the Mid-America Regional Council.

Members of the faculty attended the annual meeting of the Association of American Medical Colleges during the week of November 5. *Dr. Marjorie Sirridge*, in her second year as UMKC's representative to the Women's Liaison Officer group of the American Association of Medical Colleges, participated in the planning of several portions of the Association's 90th annual meeting. She and officers from other schools worked with the Organization of Student Representatives (OSR) to plan a panel on the "Protection of Physician Resources: The Role of Support Systems in Medical School." Dr. Sirridge gave a paper on the docent system at UMKC. Other events sponsored by the Women in Medicine group were a seminar and workshop on "N.I.H. Peer Review System," "Power Issues in Academic Medicine" and a "Research Symposium on Women in Medicine." They also participated in two symposiums entitled "Innovations in Medical Education" and "New Horizons in Cost Containment Curricula."

The St. Louis Friends of the UMKC School of Medicine held their annual fall meeting and elected *Dr. Stanley Reitman* as their new president. This group of parents of UMKC medical students sponsors an annual lectureship, an annual student research award and a spring weekend in Kansas City each year.

Dr. George A. Wolf was a visiting docent from November 27 through the 30th. Formerly dean and provost of the University of Kansas Medical Center (1966-1970) and dean of the College of Medicine in Vermont (1952-1961), Dr. Wolf is currently directing the Gerontology Unit of the Department of Medicine at Vermont. He presented a "University Hour on Patients, Medical Students and Human Behavior."

Dr. Madison Spach, chief of the Pediatric Cardiology Unit at Duke University Medical Center, spent three days at UMKC as a visiting docent on December 3-5. Dr. Spach discussed various aspects of cardiology at two morning conferences at Children's Mercy Hospital and participated in the Cardiology Conference at Truman Medical Center.

Dr. W. G. Anlyan, vice-president for Health Affairs at Duke University, presented a lecture entitled "Critical Issues Facing Medicine Today" at the University Hour on December 14.

On October 28, the School of Medicine held its annual convocation to formally welcome the new Year I students and their parents. Participating in the ceremonies were the *Hon. Ike Skelton*, U. S. Congressman, Fourth District, Missouri; *Dr. George A. Russell*, chancellor of UMKC; *Daniel L. Brenner*, member of the Board of Curators of the University of Missouri; *Dr. Harry S. Jonas*, dean of the School of Medicine; and *Dr. Xu Jia Yu*, the first Edgar Snow Professor of Medicine.

Representative Skelton spoke on the student's obligation to be involved and active citizens as well as physicians. Dr. Russell spoke of the probable changes in health care delivery and commended *Dr. E. Grey Dimond* for his contributions to medical education. Dean Jonas spoke briefly on the philosophy of the Medical School and read the Physicians Oath which the students will recite at their graduation six years hence.

Continuing Education Coming Events

> *The continuing medical education accreditation program of the MSMA has full approval by AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in* Missouri Medicine. *Please remember to include name of individual who can be contacted at your institution for additional information about your CME events.*

University of Missouri-Kansas City School of Medicine — Kansas City Southwest Clinical Society
Continuing Medical Education
2220 Holmes St., Kansas City 64108
(816) 276-1339
***Contact:* Alta Bingham**

(1980)

Jan. 20-25	Mid-Winter Traveling Medical Education Course. Kansas City Southwest Clinical Society (Steamboat Springs, Colo.)
Feb. 2-9	Medical Seminar at Sea. Kansas City Southwest Clinical Society (Caribbean Cruise leaving Miami)
Feb. 8-9	The Long Weekend: Update in Electrocardiography, Radiology and Use of the Laboratory (Crown Center Hotel)
Feb. 23-Mar. 1	Late-Winter Traveling Medical Education Course. Kansas City Southwest Clinical Society (Maui, Hawaii)
Mar. 27-29	Perspectives in Medicine (Crown Center Hotel)
Apr. 10-12	Update in Obstetrics and Gynecology (Crown Center Hotel)
May 2-3	The Long Weekend: Office Clinical Care (UMKC School of Medicine)
May 15-16	Surgical Problems, Old and New (Alameda Plaza Hotel)
June 5-6	Symposium on Physical Fitness (Crown Center Hotel)

Washington University School of Medicine
Continuing Medical Education
Box 8063, 660 S. Euclid Ave., St. Louis 63110
(314) 454-3372
***Contact:* Doris McCall, Assistant Director**

(1980)

Jan. 26	WUMC Alumni Winter Meeting (Ixtapa, Mexico)
Jan 27-Feb. 1	Ob-GYN Conference (Keystone, Colo.)
Feb. 28-29	MKSAP V
March-May	Internal Medicine Board Review (Jewish Hospital of St. Louis)
Mar. 20-21	Rheumatology Conference
Mar. 27-28	Current Concepts in Cerebrovascular Surgery
Apr. 10-11	Seventh Annual OB-GYN Symposium
Apr. 25-26	Eye Alumni Meeting
May 3-11	Second Annual Current Concepts in Musculoskeletal Radiology and Orthopedics Meeting
May 9-10	Orthopedic Radiology
May 15-16	Neuromuscular Diseases

University of Missouri School of Medicine
Office of Continuing Education
M-233 Medical Center, Columbia 65212
(314) 882-2256
***Contact:* William D. Bradshaw, M.D.**

(1980)

Feb. 17-21	Cancer Management of the Clinician of the 80s (Tamarron, Durango, Colo.)
Feb. 28-29	Nutritional Update
Mar. 4	Preceptor's Day
Mar. 5-6	Family Practice Update
Mar. 12-13	Medicine and Religion
Mar. 20-21	Spring Surgery Conference
Mar. 31-Apr. 1	26th Annual Urology Seminar (Crown Center, Kansas City)
Apr. 9-10	Primary Pediatrics for the Primary Physician
Apr. 18-20	Group Relations
May 9-11	Third Annual Missouri Cardiovascular Conference (Tan-Tar-A, Osage Beach)
June 2-3	Sixth International Symposium on Intestinal Microecology
Aug. 10-11	Third Annual Workshop in Soft Tissue Surgery

The Edward Mallinckrodt Institute of Radiology — Washington University School of Medicine
510 S. Kingshighway, St. Louis 63110
(314) 454-2291
***Contact:* Ronald G. Evens, M.D., Director**

City-Wide Radiology Conference

(1980)

Jan. 14	Conference at St. Louis University
Feb. 11	Pediatric Radiology
Mar. 10	CT of the Thorax-Updated
May 12	Parenchymal Liver Disease — Evaluation With Computed Tomography

Menorah Medical Center
4949 Rockhill Rd., Kansas City 64110
(816) 276-8000

Every Wed. & Fri.	3:00 PM — Basic Sciences to Surgery Seminar 4:00 PM — Surgical Rounds

Contact: Erich W. Pollak, M.D., Director of Surgical Education

First & Third Saturdays	9:00 AM — Surgical Techniques Seminar 9:45 AM — Morbidity and Mortality Conference 10:30 AM — Surgical Grand Rounds
Every Tues.	9:00 AM Medicine Staff Conference (Except second Tuesday of each month)

Contact: David S. Sneid, M.D., Director of Medical Education

Ed Bixby Institute for Postgraduate Education
Research Medical Center
2316 E. Meyer Blvd., Kansas City 64132
(816) 276-4167

(1980)	
Feb. 6	Carcinoma of the Breast: Update 1980
Apr. 2	Present Status of Antibiotic Therapy
June 4	Chronic Obstructive Pulmonary Disease
Aug. 6	Rheumatic Heart Disease

Greater Kansas City Radiological Society
Contact: Raymond W. Hartwig, M.D., Dept. of Radiology, Trinity Lutheran Hospital, Kansas City

(1980)	
Jan. 16	Pediatric Radiology (Dinner Meeting, Granada Royale Hometel) 4 PM Lecture (Children's Mercy Hospital)
Feb. 13	Nuclear Medicine (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (University of Kansas Medical Center)
Mar. 12	Abdominal C. T. (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (St. Luke's Hospital)
Apr. 23	Bone Roentgenology (Dinner Meeting, Alameda Plaza Hotel) 4 PM Lecture (University of Kansas Medical Center)

Missouri Baptist Eye Foundation
621 S. New Ballas Rd., Suite 343
St. Louis 63141

(1980)	
May 5-7	Eye Seminars — Contact Lenses and Intraocular Implants

Winter Traveling Medical Education Courses

presented by

Kansas City Southwest Clinical Society

You, Your Spouse, and Your Friends Are Cordially Invited to Join Us for a Week in the Sun . . . In the Middle of Winter

* * *

MEDICAL SEMINAR AT SEA
February 2-9, 1980

Aboard the luxurious M/S Starward offering every convenience and innovation for your cruising pleasure.

Leaving Miami and calling at Port Antonio, Jamaica; Port au Prince, Haiti; Nassau and a private Outer Island in the Bahamas.

Physicians' Program: 21 Hours of AMA Category 1 credit.

Spouses' Program: Specifically designed for her/him.

* * *

MAUI, HAWAII
February 23 - March 1, 1980

In the Royal Lahaina Hotel located directly on Kaanapali's inviting white sand beach and boasting every facility for your pleasure.

Optional Extension Arrangements to Honolulu available.

Physicians' Program: 16 Hours of AMA Category 1 credit.

Please send program brochure:

☐ Medical Seminar at Sea
Deadline for Reservations: *Dec. 14, 1979*

☐ Maui, Hawaii
Deadline for Reservations: *Jan. 18, 1980*

Name ____________________

Address ____________________

City ____________ State ________ Zip ________

Mail to: K. C. Southwest Clinical Society
2220 Holmes
Kansas City, Mo. 64108

Phone: 816/471-3876

New Members

Thomas Meyer Ahmann, M.D., Landmark Bldg., Mexico 65265, has become a member of Audrain County Medical Society. Dr. Ahmann is a native of Washington (Mo.), received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1967. He specializes in urological surgery.

Jafar Amini, M.D., Dept. of Radiology, Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of Jackson County Medical Society. Dr. Amini is a native of Iran, received his preliminary education at Tehran University and his M.D. degree at Tehran University in 1963. He specializes in diagnostic radiology.

John F. AufderHeide, M.D., Mallinckrodt Institute of Radiology, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. AufderHeide is a native of St. Louis, received his preliminary education at the University of Missouri and his M.D. degree at Washington University in 1976. He specializes in diagnostic radiology.

Laurence R. Avins, M.D., University Club Tower, 1034 S. Brentwood, St. Louis 63117, has become a member of St. Louis Metropolitan Medical Society. Dr. Avins is a native of New York, N. Y., received his preliminary education at Cornell University and his M.D. degree at Cornell University in 1971. He specializes in ophthalmology.

Jack M. Bagby, Jr., M.D., 1550 E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. Bagby is a native of Kansas City, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1975. He specializes in internal medicine.

Richard L. Baron, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Baron is a native of Springfield, Mass., received his preliminary education at Yale University and his M.D. degree at Washington University in 1976. He specializes in radiology.

Arthur F. Bishop, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Bishop is a native of Evanston, Ill., received his preliminary education at Northwestern University and his M.D. degree at the University of Illinois in 1977. He specializes in diagnostic radiology.

J. Douglas Bradley, M.D., 238 Pioneer Building, St. Joseph 64501, has become a member of Buchanan County Medical Society. Dr. Bradley is a native of Greensberg, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1976. He specializes in family practice.

Barry D. Brown, M.D., 35 N. Central, Clayton 63105, has become a member of St. Louis Metropolitan Medical Society. Dr. Brown is a native of Peoria, Ill., received his preliminary education at the University of Illinois and his M.D. degree at the University of Illinois in 1970. He specializes in internal medicine and gastroenterology.

Floyd W. Brown, D.O., Lincoln County Memorial Hospital, Troy 63379, has become a member of St. Charles-Lincoln County Medical Society. Dr. Brown is a native of Kansas City, received his preliminary education at the University of Missouri and his D.O. degree at Kansas City College of Osteopathic Medicine in 1978. He specializes in general practice.

Robert Patrick Burns, M.D., N309, Medical Center, University of Missouri, 807 Stadium Rd., Columbia 65201, has become a member of Boone County Medical Society. Dr. Burns is a native of Portland, Ore., received his preliminary education at the University of Portland and his M.D. degree at the University of Oregon in 1947. He specializes in ophthalmology.

Ooch Thomas Cantrell, M.D., 706 S. High, Butler 64730, has become a member of West Central Missouri Medical Society. Dr. Cantrell is a native of Kansas City, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1979. He specializes in general practice.

David A. Carr, M.D., Thompson Brumm Knepper Clinic, 902 Edmond, St. Joseph 64502, has become a member of Buchanan County

Medical Society. Dr. Carr is a native of Marshall, received his preliminary education at Missouri Valley College and his M.D. degree at Creighton University in 1973. He specializes in obstetrics and gynecology.

Mou Shyong Chern, M.D., 1303 Jefferson, Ava 65608, has become a member of South Central Counties Medical Society. Dr. Chern is a native of Taiwan, received his preliminary education at Kaushiung Medical College of Pharmacy and his M.D. degree at Nagasaki University in 1972. He specializes in internal medicine.

Curtis S. Cox, M.D., 1433 Southwest Blvd., Jefferson City 65101, has become a member of Cole County Medical Society. Dr. Cox is a native of Trinidad, received his preliminary education at the University of the West Indies and his M.D. degree at the University of the West Indies in 1970. He specializes in neurological surgery.

Oman Eugene Dement, M.D., 501 Teaco Rd., Kennett 63857, has become a member of Dunklin County Medical Society. Dr. Dement is a native of Ellington, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1972. He specializes in obstetrics and gynecology.

John Kent Dexter, M.D., 609 Cherry, Springfield 65801, has become a member of Greene County Medical Society. Dr. Dexter is a native of Independence, received his preliminary education at Baker University and his M.D. degree at the University of Missouri in 1976. He specializes in internal medicine.

William Michael Duff, M.D., Texas County Memorial Hospital Clinic, 1333 S. Highway 63, Houston 65483, has become a member of South Central Counties Medical Society. Dr. Duff is a native of Springfield, received his preliminary education at Westminster College and his M.D. degree at Washington University in 1973. He specializes in general surgery.

James W. Ebberts, M.D., 8928 Grand, Kansas City 64114, has become a member of Jackson County Medical Society. Dr. Ebberts is a native of Kansas City, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1976. He specializes in internal medicine.

Mark Robert Feldman, M.D., 216 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Feldman is a native of St. Louis, received his preliminary education at Tulane University and his M.D. degree at Louisiana State University in 1976. He specializes in obstetrics and gynecology.

Norman Fishman, M.D., 777 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Fishman is a native of New York, N. Y., received his preliminary education at Columbia College and his M.D. degree at Columbia College in 1974. He specializes in endocrinology.

Kerry Everett Florence, M.D., St. John's Mercy Medical Center, 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Florence is a native of Carrollton, Ill., received his preliminary education at Eastern Illinois Univer-

---

Component Society News

FIRST DISTRICT

COUNCILOR
RICHARD C. HEDGES, M.D.,
N. KANSAS CITY

Buchanan County Medical Society

For the 24th consecutive year, members of the Buchanan County Medical Society and St. Joseph Bar Association met jointly for a dinner and program at the Moila Club in St. Joseph.

The presidents of the two groups presided jointly. They are Dr. Carl K. Ness of the Medical Society and Mr. James R. Bocell of the Bar Association.

Betty Jane Anderson, assistant general counsel for the American Medical Association, was the speaker for the session. Her topic was "Madison Avenue Comes to Medicine and Law." Miss Anderson discussed the antitrust climate facing the medical and legal professions and the changes that have been occurring in the traditional self-regulatory roles of the two professions as a result of the evolving application of the antitrust laws to both professional associations.

Dr. John N. Martin, immediate past-president of the Missouri State Medical Association, introduced the speaker.

Robert R. Stuber, M.D., *Secretary*

sity and his M.D. degree at Southern Illinois University in 1978. He specializes in family practice.

Randall Gene Friesen, M.D., 1301 Boonslick, St. Charles 63301, has become a member of St. Charles-Lincoln County Medical Society. Dr. Friesen is a native of Newton, Kan., received his preliminary education at Bethel College and his M.D. degree at Kansas University in 1975. He specializes in obstetrics and gynecology.

Howard Vincent Frisch, M.D., 666 Lester, Poplar Bluff 63901, has become a member of Butler-Wayne-Ripley-Carter Medical Society. Dr. Frisch is a native of Denver, Colo., received his preliminary education at the University of Colorado and his M.D. degree at the University of Colorado in 1970. He specializes in pathology.

David E. Goldstein, M.D., University of Missouri, Columbia Medical Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Goldstein is a native of Fredrick, Okla., received his preliminary education at Carleton College and his M.D. degree at the University of Pittsburgh in 1969. He specializes in pediatrics and pediatric endocrinology.

Ruth Grant, M.D., 609 E. Cherry, Springfield 65801, has become a member of Greene County Medical Society. Dr. Grant is a native of New Jersey, received her preliminary education at Douglass College and her M.D. degree at the University of Chicago in 1974. She specializes in internal medicine and hematology.

Robert E. Hales, M.D., Huddle Plaza, Corning, Ark. 72422, has become a member of Butler-Wayne-Ripley-Carter Medical Society. Dr. Hales is a native of Des Moines, Iowa, received his preliminary education at DePauw University and his M.D. degree at Indiana University in 1960. He specializes in family practice.

Richard A. Hartman, M.D., Jewish Hospital, 216 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Hartman is a native of Dyersburg, Tenn., received his preliminary education at Massachusetts Institute of Technology and his M.D. degree at the University of Missouri in 1978. He specializes in obstetrics and gynecology.

(Continued)

★
Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
Since 1899
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

EASTERN MISSOURI OFFICE: Ralph E. Bargmann and Philip E. Mappert, Representatives
13100 Manchester Road, St. Louis 63131
Telephone: (Area Code 314) 965-7400
WESTERN MISSOURI OFFICE: Robert E. McCurdy, Representative
Suite 202-A, 6600 W. 95th Street, Overland Park, Kansas — P.O. Box 6101, Leawood, Kansas 66206
Telephone: (Area Code 913) 381-4222

Robert W. Karr, M.D., 7049 Maryland, St. Louis 63130, has become a member of St. Louis Metropolitan Medical Society. Dr. Karr is a native of Pampa, Tex., received his preliminary education at Southwestern University and his M.D. degree at the University of Texas in 1975. He specializes in internal medicine.

Bruce A. Kauk, M.D., 2029 Burlington, Kansas City 64116, has become a member of Clay County Medical Society. Dr. Kauk is a native of Holdrege, Neb., received his preliminary education at the University of Nebraska and his M.D. degree at the University of Nebraska in 1976. He specializes in internal medicine.

Jerry Dale Kennett, M.D., 401 Keene, Columbia 65201, has become a member of Boone County Medical Society. Dr. Kennett is a native of Fulton, received his preliminary education at Westminster College and his M.D. degree at the University of Missouri in 1973. He specializes in internal medicine.

Steven Kent Kreuger, M.D., 900 N. Belt Highway, St. Joseph 64501, has become a member of Buchanan County Medical Society. Dr. Kreuger is a native of Kearney, Neb., received his preliminary education at Nebraska Wesleyan University and his M.D. degree at the University of Nebraska in 1976. He specializes in internal medicine and cardiovascular diseases.

Robert J. LacKamp, M.D., 702 Jule, St. Joseph 64501, has become a member of Buchanan County Medical Society. Dr. LacKamp is a native of Kansas City, received his preliminary education at Kansas State University and his M.D. degree at the University of Kansas in 1973. He specializes in radiology.

Frank H. Lewis, M.D., Suite 403, 1515 W. Truman Rd., Independence 64050, has become a member of Jackson County Medical Society. Dr. Lewis is a native of Wichita, Kan., received his preliminary education at Kansas State College and his M.D. degree at the University of Kansas in 1976. He specializes in internal medicine.

Orlyn Olney Lockard, Jr., M.D., Thompson-Brumm-Knepper Clinic, 902 Edmond, St. Joseph 64502, has become a member of Buchanan County Medical Society. Dr. Lockard is a native of Cape Girardeau, received his preliminary edu-

Prepare For:
- NATIONAL MEDICAL BDS
- VQE
- ECFMG
- FLEX
- DENTAL BDS
- PODIATRY BDS
- NURSING BDS

- Voluminous home study notes on all areas of basic science.
- Teaching tests accompanied by comprehensive teaching tapes to be used at any of our tape centers.
- Materials constantly updated.
- Over 40 years of experience and success in the field of test preparation.

Stanley H. KAPLAN
EDUCATIONAL CENTER

Call
(314) 997-7791
8420 Delmar, Suite 301
University City, Mo. 63124

●

For Information About Other Centers
Outside NY State Call TOLL FREE
800-223-1782
Centers in More Thon 80 Major US Cities
Puerto Rico, Toronto, Conodo & Zurich, Switzerlond

MUNNS
MEDICAL
SUPPLY

9202 Barton Overland Park, Ks. 66214 913-492-5820

cation at the University of Kansas and his M.D. degree at the University of Missouri in 1974. He specializes in internal medicine and gastroenterology.

Herbert Lubowitz, M.D., 8515 Delmar, St. Louis 63124, has become a member of St. Louis Metropolitan Medical Society. Dr. Lubowitz is a native of Maine, received his preliminary education at Clark University and his M.D. degree at Washington University in 1958. He specializes in internal medicine and nephrology.

John Patrick Mahoney, M.D., Dept. of Pathology, M646, University of Missouri Medical Center, Columbia 65201, has become a member of Boone County Medical Society. Dr. Mahoney is a native of Kalamazoo, Mich., received his preliminary education at the University of Florida and his M.D. degree at the University of Florida in 1970. He specializes in pathology.

George Laverty McElroy III, M.D., 917A Leslie Blvd., Jefferson City 65101, has become a member of Cole County Medical Society. Dr. McElroy is a native of St. Louis, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1973. He specializes in pediatrics.

David Ralph Mehr, M.D., 1502 E. Broadway, Columbia 65201, has become a member of Boone County Medical Society. Dr. Mehr is a native of San Jose, Calif., received his preliminary education at the University of California and his M.D. degree at the University of California in 1976. He specializes in family practice.

Shomendra Kumar Moitra, M.D., P.O. Box 277, Memphis 63555, has become a member of Lewis-Clark-Scotland County Medical Society. Dr. Moitra is a native of India, received his preliminary education at St. Edmunds College and his M.D. degree at National Medical College in 1966. He specializes in general surgery.

Rafik David Muawwad, M.D., 1335 Village Dr., St. Joseph 64506, has become a member of Buchanan County Medical Society. Dr. Muawwad is a native of Lebanon, received his preliminary education at the American University of Beirut and his M.D. degree at the American University of Beirut. He specializes in orthopedics.

Ahmad Hussein Muraywid, M.D., 212 E. Monroe, Mexico 65265, has become a member of Audrain County Medical Society. Dr. Muraywid is a native of Syria, received his preliminary education at Damascus University and his M.D. degree at Damascus University in 1968. He specializes in pediatrics.

Pedro Ochoa, M.D., 1704 S. Broadway, St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. Ochoa is a native of Mexico, received his preliminary education at the University of Sinaloa and his M.D. degree at National University of Mexico in 1962. He specializes in general surgery.

Dennis M. O'Connor, M.D., 1465 S. Grand Blvd., St. Louis 63104, has become a member of St. Louis Metropolitan Medical Society. Dr. O'Connor is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1967. He specializes in pediatrics and pediatric hematology-oncology.

Jean Otrakji, M.D., 1734 E. 63rd, Kansas City 64110, has become a member of Jackson County Medical Society. Dr. Otrakji is a native of Syria, received her preliminary education at Damascus University and her M.D. degree at Damascus University in 1972. She specializes in internal medicine.

Bruce Edward Preston, M.D., 805 Kentucky, West Plains 65775, has become a member of South Central Counties Medical Society. Dr. Preston is a native of Cape Girardeau, received his preliminary education at Southeast Missouri State University and his M.D. degree at the University of Missouri in 1976. He specializes in family practice.

Arturo Geotina Quiason, M.D., 4801 Lindwood Blvd., Kansas City 64128, has become a member of Jackson County Medical Society. Dr. Quiason is a native of the Philippines, received his preliminary education at the University of the Philippines and his M.D. degree at the University of the Philippines in 1969. He specializes in psychiatry.

Fred William Reineke, M.D., 615 S. New Ballas Rd., St. Louis 63141, has become a member of St. Louis Metropolitan Medical Society. Dr. Reineke is a native of St. Louis, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1977. He specializes in pathology.

Ronald Nathan Riner, M.D., 950 Francis Pl., Clayton 63105, has become a member of St. Louis

Metropolitan Medical Society. Dr. Riner is a native of Hot Springs, S. D., received his preliminary education at Princeton University and his M.D. degree at Cornell University in 1974. He specializes in cardiology.

Amir Ron, M.D., 4940 Audubon, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Ron is a native of Israel, received his preliminary education at Hebrew University and his M.D. degree at Hadassah School of Medicine in 1972. He specializes in psychiatry.

Robert L. Scearce, M.D., 1505 Southwest Blvd., Jefferson City 65101, has become a member of Cole County Medical Society. Dr. Scearce is a native of St. Joseph, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1975. He specializes in diagnostic radiology.

Howard Schwartz, M.D., 1550 E. Sunshine, Springfield 65804, has become a member of Greene County Medical Society. Dr. Schwartz is a native of Terre Haute, Ind., received his preliminary education at the University of Chicago and his M.D. degree at the University of Chicago in 1974. He specializes in internal medicine.

Robert Wayne Scott, M.D., 609 Cherry, Springfield 65806, has become a member of Greene County Medical Society. Dr. Scott is a native of Jefferson City, received his preliminary education at Harding College and his M.D. degree at the University of Missouri in 1972. He specializes in internal medicine.

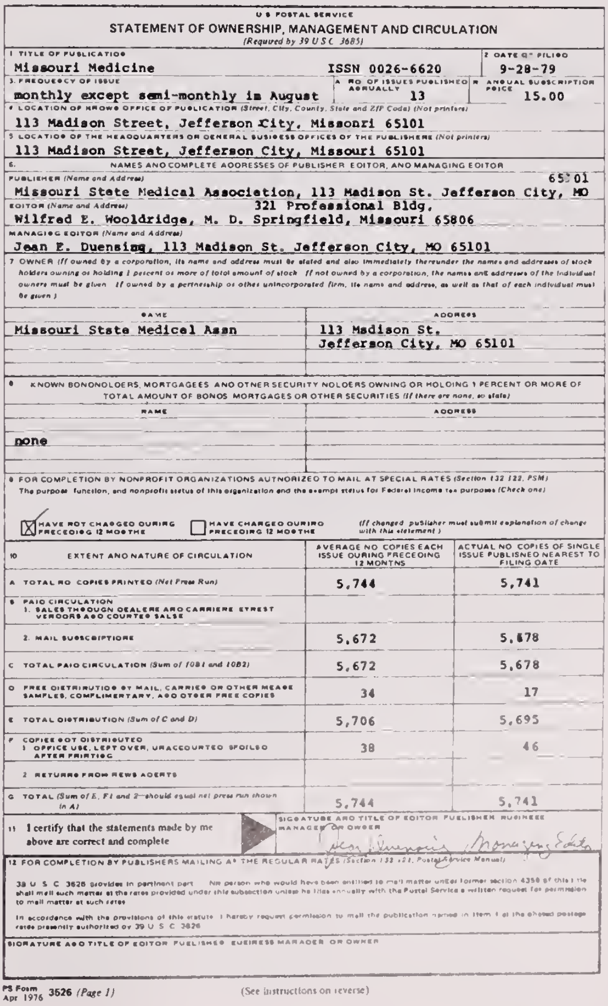
Stephen G. Slocum, M.D., 211 N. Meramec, St. Louis 63105, has become a member of St. Louis Metropolitan Medical Society. Dr. Slocum is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1975. He specializes in ophthalmology.

George M. Steele, Jr., M.D., 1211 S. Glenstone, Springfield 65804, has become a member of Greene County Medical Society. Dr. Steele is a native of Fort Worth, Tex., received his preliminary education at Arlington State College and his M.D. degree at the University of Texas in 1970. He specializes in general practice.

Chandrakant C. Tailor, M.D., 510 S. Kingshighway, St. Louis 63110, has become a member of St. Louis Metropolitan Medical Society. Dr. Tailor is a native of India, received his preliminary education at Faculty of Science, Baroda, and his M.D. degree at the Medical College of Baroda, in 1971. He specializes in radiology.

Robert Douglas Velander, M.D., 3219 Lakewood Dr., Cape Girardeau 63701, has become a member of Cape Girardeau County Area Medical Society. Dr. Velander is a native of Ft. Worth, Tex., received his preliminary education at Arkansas State University and his M.D. degree at Kansas University in 1974. He specializes in emergency medicine.

Vernon E. Weikel, M.D., Emergency Room, St. Joseph Hospital, 923 Powell St., St. Joseph 64501, has become a member of Buchanan County Medical Society. Dr. Weikel is a native of Little Sioux, Iowa, received his preliminary education at the University of Iowa and his M.D. degree at the University of Iowa in 1952. He specializes in anesthesiology.



U S POSTAL SERVICE

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(Required by 39 U S C 3685)

1 TITLE OF PUBLICATION: Missouri Medicine ISSN 0026-6620

2 DATE OF FILING: 9-28-79

3. FREQUENCY OF ISSUE: monthly except semi-monthly in August

A NO. OF ISSUES PUBLISHED ANNUALLY: 13

B ANNUAL SUBSCRIPTION PRICE: 15.00

4 LOCATION OF KNOWN OFFICE OF PUBLICATION *(Street, City, County, State and ZIP Code) (Not printers)*: 113 Madison Street, Jefferson City, Missouri 65101

5 LOCATION OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS *(Not printers)*: 113 Madison Street, Jefferson City, Missouri 65101

6. NAMES AND COMPLETE ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR

PUBLISHER *(Name and Address)*: Missouri State Medical Association, 113 Madison St. Jefferson City, MO 65101

EDITOR *(Name and Address)*: Wilfred E. Wooldridge, M. D. 321 Professional Bldg. Springfield, Missouri 65806

MANAGING EDITOR *(Name and Address)*: Jean E. Duensing, 113 Madison St. Jefferson City, MO 65101

7 OWNER *(If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stock holders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)*

NAME	ADDRESS
Missouri State Medical Assn	113 Madison St. Jefferson City, MO 65101

8 KNOWN BONDHOLDERS, MORTGAGEES AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES *(If there are none, so state)*

NAME	ADDRESS
none	

9 FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES *(Section 132 122, PSM)*
The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes *(Check one)*

☒ HAVE NOT CHANGED DURING PRECEDING 12 MONTHS ☐ HAVE CHANGED DURING PRECEDING 12 MONTHS *(If changed, publisher must submit explanation of change with this statement.)*

10 EXTENT AND NATURE OF CIRCULATION	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	ACTUAL NO. COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE
A TOTAL NO. COPIES PRINTED *(Net Press Run)*	5,744	5,741
B PAID CIRCULATION 1. SALES THROUGH DEALERS AND CARRIERS, STREET VENDORS AND COUNTER SALES		
2. MAIL SUBSCRIPTIONS	5,672	5,678
C TOTAL PAID CIRCULATION *(Sum of 10B1 and 10B2)*	5,672	5,678
D FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS SAMPLES, COMPLIMENTARY, AND OTHER FREE COPIES	34	17
E TOTAL DISTRIBUTION *(Sum of C and D)*	5,706	5,695
F COPIES NOT DISTRIBUTED 1 OFFICE USE, LEFT OVER, UNACCOUNTED, SPOILED AFTER PRINTING	38	46
2 RETURNS FROM NEWS AGENTS		
G TOTAL *(Sum of E, F1 and 2—should equal net press run shown in A)*	5,744	5,741

11 I certify that the statements made by me above are correct and complete

SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER: Jean Duensing Managing Editor

12 FOR COMPLETION BY PUBLISHERS MAILING AT THE REGULAR RATES *(Section 132 121, Postal Service Manual)*

39 U. S. C. 3626 provides in pertinent part: "No person who would have been entitled to mail matter under former section 4359 of this title shall mail such matter at the rates provided under this subsection unless he files annually with the Postal Service a written request for permission to mail matter at such rates."

In accordance with the provisions of this statute, I hereby request permission to mail the publication named in Item 1 at the phased postage rates presently authorized by 39 U. S. C. 3626.

SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER

PS Form Apr 1976 3526 *(Page 1)* (See instructions on reverse)

Index to Volume 76

A

Abadir, Rushdy—Hyperthermia. A Modality of Cancer Therapy—Special Review Article 581
Ackerman, A. Bernard—A Presentation of Ailing Medical Education in America 10
Acoustic Tumors and Other Cerebellopontine Angle Lesions—A Two-Year Surgical Experience—Luetje and Whittaker 482
All In A Day's Work—Wooldridge—Editor's Corner 67, 311
Allard, J. Brad and Thomas, J. Regan—Diagnosis and Treatment of Serous Otitis Media 479
AMA—In Brief—A Summary of AMA. Medical and Health News 105, 170, 235, 246, 256, 334, 418, 505, 523, 600, 650
AMA Scores Congressional Report on Surgery 52
Antibiotic-Associated Pseudomembranous Colitis—Jensen and McAllister 534
Aphorisms—Wooldridge—Editor's Corner 521
Art of Healing, The—Tumulty—Special Article 250

B

Bedside Diagnosis of Deep Venous Thrombosis—A Myth Exposed—Pogson and Conn 203
Berg, Janet and Canoy, Nestor R.—Malignancies of the Nasal Fossa 323
Beyond Aesop—Wooldridge—Editor's Corner 249
Blanchard, Susan *et al*—Update on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas—Case Reports 492
Blunt Trauma With Delayed Femoral Artery Occlusion—Dupont—Case Report 531
Bowen, Stephen F., Jr. *et al*—Orbital Blowout Fracture Due to a Diving Accident—Case Report 487
Brightwell, Dennis R. *et al*—Commitment of the Mentally Ill in Missouri 591
Butcher, Harvey R. *et al*—Internal Iliac Artery Aneurysm: Unusual Cause of Lower Abdominal and Pelvic Symptoms—Case Reports 424

C

Campbell, Jan L. *et al*—Commitment of the Mentally Ill in Missouri 591
Canoy, Nestor R. and Berg, Janet—Malignancies of the Nasal Fossa 323
Carcinoma of the Breast: The Role of Estrogen and Other Receptor Determinations—Meyer, Stevens and White 89
Carotid Endarterectomy, 100 Consecutive Operations—Pinkerton and Gholkar 585
Case Reports—
  Blunt Trauma With Delayed Femoral Artery Occlusion—Dupont 531
  Cutaneous Protrusion of a Sliding Compression Screw—Shively 320
  Human Tetanus—Prevention and Treatment—Gertzen, Huster and Hamory 525
  Infantile Botulism in Missouri—Mantovani, Katz, Gellman and Lyss 160
  Internal Iliac Artery Aneurysm: Unusual Cause of Lower Abdominal and Pelvic Symptoms—Victor, Halverson and Butcher 424
  Leptospirosis and Limb Gangrene—Pfaller and Wray 157
  Massive Hepatic Necrosis Following Selective Arterial Embolization—Stothert, Dubuque and Srivisal 489
  Multiple Unusual Pulmonary Nodules—Martin, Rasario, Tucker and Parnell 313
  Orbital Blowout Fracture Due to a Diving Accident—Wright, Bowen and Morgan 487
  Perinephric Abscess: The University of Missouri Experience—DePauw, Montie and Ross 429
  Physiologic Delay of Menarche—Fayez, Sowers and Miller 207
  Severe Hand Venous Hypertension With an End-to-Side Radiocephalic Fistula—Garvin and Codd 210
  Update on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas—Fayez, Sowers, Blanchard, Finnie and Morris 492
  Use of a High Bulk Diet After a Small Bowel Bypass Operation for Obesity—Glass 34
  Variability of Clinical Manifestations in Pheochromocytoma—Hamburger 593
Clawson, James W.—Photo Comment 8, 66, 124, 192, 248, 310, 356, 416, 468, 520, 528, 624
Codd, John E. and Garvin, Paul J.—Severe Hand Venous Hypertension With an End-to-Side Radiocephalic Fistula—Case Report 210
A Comment on CME—Editor's Corner—Wooldridge 417
Commitment of the Mentally Ill in Missouri—Brightwell, Faheem, Campbell and Neal 591
Component Society News 40, 180, 293, 342, 556, 606, 657
Conn, Robert D. and Pogson, G. William—Bedside Diagnosis of Deep Venous Thrombosis—A Myth Exposed 203
Continuing Education Coming Events 50, 106, 168, 227, 289, 340, 453, 501, 546, 608, 654
Cozad, Robert L. *et al*—On Hearing Aid Recommendation 77
Crisp, N. Denny and Pemberton, L. Beaty—Management of Obscure Causes of Benign Obstructive Jaundice 427
Current Concepts in Breast Cancer—Part II. Pathological Considerations and Early Diagnosis—Kardinal 30
Current Concepts in Breast Cancer—Part III. Staging, Primary Therapy and Adjuvant Chemotherapy—Kardinal 151
Current Concepts in Breast Cancer—Part IV. Approach to the Patient With Advanced Disease—Kardinal 432
Current Concepts of Back Pain—Gragnani 421
Cutaneous Protrusion of a Sliding Compression Screw—Shively—Case Report 320

D

Davis, William E. *et al*—On Hearing Aid Recommendation 77
Davis, William E. *et al*—Tonsillectomy—Is It Necessary? 25
Deaths—
  Althaus, Carl J. 454
  Bartlett, Robert W. 343
  Beatty, Arch Joe 180
  Bernreiter, Michael 404
  Bowdish, Palmer R. 109
  Brust, Carl H. 228
  Davis, Kenneth A. 648
  Ferguson, Luther John 109
  Finger, Donald H. 508
  Fuchs, George J., Sr. 404
  Fuson, Levi H. 552
  Gibstine, Marvin H. 552
  Grabske, Charles F. 109
  Greene, W. Wallace 508
  Hampton, Henry E. 228
  Henderlite, John Warren 228
  Hetlage, Louis P. 508
  Hoover, Herbert Lee 109
  Houston, Vincent 454
  Hunt, John W. 278
  Hunter, Martin P. 404
  Hutto, A. Herman 278
  Isbell, Charles Harlow 180
  Jacob, Walter P. 278
  Kirstein, Melvin B. 228
  Langston, Walter Roland 508
  Levy, Irwin 607
  Long, David S. 228
  McLeod, John 180
  Manganaro, Frank Joseph 180
  Maxey, Hugh W. 228
  Mays, Frank G. 228
  Menendez, Manual F. 508
  Mountjoy, Grace S. 404
  Napper, Marvin L. 508
  Pasco, James John 49
  Potter, Lee George 404
  Reich, Harry A. 607
  Rose, Charles W. 404
  Schneider, Sam 607
  Sneid, Philip 278
  Stacy, Winton T. 278
  Walker, James Charles 607
  Walters, John H. 228
  Weed, Randal 607
  Whiteman, John 228
  Wilcoxen, William B. 49
  Williams, Ray David 648
Deaths Attributed to Drugs in St. Louis City and County, A Brief Survey, 1977-1978—Poklis and Gantner 588
DePauw, A. Philip *et al*—Pelvic Lymphadenectomy in Prostatic Carcinoma 23
DePauw, A. Philip *et al*—Perinephric Abscess: The University of Missouri Experience—Case Report 429
Depressive Illness in Children—Husain 527
Diagnosis and Treatment of Serous Otitis Media—Thomas and Allard 479
Dr. Richard V. Bradley Elected MSMA President-Elect 335
Dubuque, Theodore J., Jr. *et al*—Massive Hepatic Necrosis Following Selective Arterial Embolization—Case Report 489
Dupont, Jean René—Blunt Trauma With Delayed Femoral Artery Occlusion—Case Report 531

E

Editorial—Let's Avoid the Factors That Have Damaged Labor's Political Clout 224
Editorial—Living Up To Principles—Nesbitt 97
Editor's Corner—
  Editor's Corner—Wooldridge 9
  All in A Day's Work—Wooldridge 67
  All in A Day's Work—Wooldridge 311
  And a Happy New Year, Too! 625
  Aphroisms—Wooldridge 521
  Beyond Aesop—Wooldridge 249
  A Comment on CME—Wooldridge 417
  The Older Among Us—Wooldridge 469
  Small Beginnings and Great (?) Endings—Wooldridge 125

The State of the Nation—Wooldridge 357
Through the Microscope—Wooldridge 193
Whence?—Wooldridge 579
Edmonds, Robert W.—Letters to the Editor 545
Effects of Antiplatelet Drugs on Platelet Function Tests—Sirridge, Shannon, Willoughby and Steele 212

F

Faheem Ahmed D. *et al*—Commitment of the Mentally Ill in Missouri 591
Fayez, Jamil A. *et al*—Physiologic Delay of Menarche—Case Report 207
Fayez, Jamil A. *et al*—Update on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas—Case Reports 492
Federal Agencies Called Threat to Science Journals 236
Finnie, Betty Y. *et al*—Update on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas—Case Reports 492
From the Medical Schools
43, 108, 173, 225, 290, 338, 446, 503, 550, 603, 652
Future of Medical Profession Lies in Medical Students of Today 401

G

Gantner, George E. and Poklis, Alphonse—Deaths Attributed to Drugs in St. Louis City and County, A Brief Survey, 1977-1978 588
Garvin, Paul J. and Codd, John E.—Severe Hand Venous Hypertension With an End-to-Side Radiocephalic Fistula—Case Report 210
Gellman, Elliot *et al*—Infantile Botulism in Missouri—Case Report 160
Gertzen, Jo *et al*—Human Tetanus—Prevention and Treatment—Case Report 525
Gholkar, Vijay and Pinkerton, Joe A., Jr.—Carotid Endarterectomy, 100 Consecutive Operations 585
Glass, Robert L.—Use of a High Bulk Diet After a Small Bowel Bypass Operation for Obesity—Case Reports 34
Gragnani, John—Current Concepts of Back Pain 421
Gruenewald, Richard L. and Perry, Michael C.—Thrombotic Thrombocytopenic Purpura 316

H

Halverson, John D. *et al*—Internal Iliac Artery Aneurysm: Unusual Cause of Lower Abdominal and Pelvic Symptoms—Case Reports 424
Hamburger, Stephen—Variability of Clinical Manifestations in Pheochromocytoma—Case Report 593
Hamory, Bruce H.—Human Tetanus—Prevention and Treatment—Case Report 525
Heparin Induced Thrombocytopenia—A Life and Limb Threatening Complication of Heparin Therapy—Kapsch and Silver 274
Human Tetanus—Prevention and Treatment—Gertzen, Huster and Hamory—Case Report 525
Hunt, Robert S. *et al*—Update of Stapled Bowel Anastomosis 145
Husain, Syed Arshad—Depressive Illness in Children 527
Huster, Robert M. *et al*—Human Tetanus—Prevention and Treatment—Case Report 525
Hyperthermia, A Modality of Cancer Therapy—Abadir—Special Review Article 581

I

Infantile Botulism in Missouri—Mantovani, Katz, Gellman and Lyss—Case Report 160
Internal Iliac Artery Aneurysm: Unusual Cause of Lower Abdominal and Pelvic Symptoms—Victor, Halverson and Butcher—Case Reports 424

J

Jensen, Michael D. and McAllister, C. Kenneth—Antibiotic-Associated Pseudomembranous Colitis 534
Joseph, Donald J. *et al*—Tonsillectomy—Is It Necessary? 25

K

Kapsch, Donald N. and Silver, Donald—Heparin Induced Thrombocytopenia—A Life and Limb Threatening Complication of Heparin Therapy 274
Kardinal, Carl G.—Current Concepts in Breast Cancer—Part II. Pathologic Considerations and Early Diagnosis 30
Kardinal, Carl G.—Current Concepts in Breast Cancer—Part III. Staging, Primary Therapy and Adjuvant Chemotherapy 151
Kardinal, Carl G.—Current Concepts in Breast Cancer—Part IV. Approach to the Patient With Advanced Disease 432
Kasten, Melvin C. *et al*—Update on Stapled Bowel Anastomosis 145
Katz, Carol *et al*—Infantile Botulism in Missouri—Case Report 160
Kinder, Jerry L. *et al*—Update on Stapled Bowel Anastomosis 145
Klachko, David M.—Rational Use of Insulin 270

L

Laetrile "Case Histories"—A Review and Critique—Yarbro 195
Lampton, Lawrence M. and Winship, Daniel H.—The "No Code Blue" Issue: Missouri Is Not Massachusetts 259
Leptospirosis and Limb Gangrene—Pfaller and Wray—Case Report 157
Let's Avoid the Factors That Have Damaged Labor's Political Clout 224
Letters to the Editor 165, 358
Letters to the Editor—Edmonds 545
A Life and Limb Threatening Complication of Heparin Therapy—Heparin Induced Thrombocytopenia—Kapsch and Silver 274
Living Up To Principles—Nesbitt—Editorial 97
Luetje, Charles M. and Whittaker, C. Keith—Acoustic Tumors and Other Cerebellopontine Angle Lesions—A Two-Year Surgical Experience 482
Lyss, Stanley *et al*—Infantile Botulism in Missouri—Case Report 160

Mc

McAllister, C. Kenneth and Jensen, Michael D.—Antibiotic-Associated Pseudomembranous Colitis 534
McGinty, Charles P *et al*—Update on Stapled Bowel Anastomosis 145

M

Major, Byron, *et al*—Remember the Allen Test 81
Malignancies of the Nasal Fossa—Canoy and Berg 323
Maltby, James D.—Radiographic Manifestations of Pulmonary Aspergillosis—A Review of Four Cases 265
Management of Obscure Causes of Benign Obstructive Jaundice—Crisp and Pemberton 427
Mantovani, John *et al*—Infantile Botulism in Missouri—Case Report 160
Martin, David S. *et al*—Multiple Unusual Pulmonary Nodules—Case Report 313
Massive Hepatic Necrosis Following Selective Arterial Embolization—Stothert, Dubuque and Srivisal—Case Report 489
Meyer, John S. *et al*—Carcinoma of the Breast: The Role of Estrogen and Other Receptor Determinations 89
Miller, Dennis W. *et al*—Physiologic Delay of Menarche—Case Report 207
Missouri Medicine in Review
54, 114, 182, 238, 298, 346, 458, 510, 566, 614, 666
Missouri Medicine . . . Why and How! 14
Missouri State Medical Association—
  121st Annual Session Exhibitors 400
  121st Annual Session—In Memoriam 393
  Annual Session 1979—Pictorial Review 360
  121st Annual Session Resolutions 388
  Auxiliary Officers, Directors and Committee Chairmen 558
  Changes in the MSMA Constitution 388
  Commercial Exhibits List—121st Annual Session 143
  Committees and Commissions 468
  Component Societies, Officers 469
  Council 466
  Councilor Districts and Counties in Each District 472
  Financial Statement for the Year 1978 178
  Guide to Component Medical Societies 470
  List of Designated Specialty Codes 557
  Minutes of the 121st Annual Session House of Delegates 374
  News Round-Up .... Inserts 5-6, 62-63, 118-119, 188-189, 246-247, ... 302-303, 354-355, 414-415, 466-467, 516-517, 572-573, 622-623
  Officers 464
  Official Delegates—121st Annual Session 137
  Policy Manual 569
  Preliminary Program—121st Annual Session 18, 71, 132
  President Martin Addresses House of Delegates at Third Interim Session 68
  Registration of the 121st Annual Session 396
  Remarks of Andrew McCanse, M.D., President-Elect 367
  Remarks of John N. Martin, M.D., President 365
  Report of Mrs. A. J. Campbell, President of the MSMA Auxiliary 372
  Reports of Committees and Commissions 382
  Roster of Auxiliary Members by Society 562
  Roster of Members, Alphabetical 473
  Roster of Members by Component Societies 506
  Transactions of the Missouri State Medical Association—Third Interim Session 99
Missouri State Medical Foundation—
  Financial Statement—Dec. 31, 1978 180
  Minutes of Annual Meeting 393
  Minutes of Board of Trustees Meeting 393
Missouri Voluntary Health Agencies and Organizations 573
Montie, Joseph *et al*—Pelvin Lymphadenectomy in Prostatic Carcinoma 23
Montie, Joseph *et al*—Perinephric Abscess: The University of Missouri Experience—Case Report 429
Morgan, Stephan S. *et al*—Orbital Blowout Fracture Due to a Diving Accident—Case Report 487
Morris, Terry *et al*—Update on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas—Case Reports 492
Mrs. Rudy Ruhling Installed as President of MSMA Auxiliary 335
MSMA Auxiliary 39, 94, 164, 223, 283, 333, 443, 500, 540, 599, 646
MSMA Members Receive Physician's Recognition Award 541
Multiple Unusual Pulmonary Nodules—Martin, Rasario, Tucker and Parnel—Case Report 313
A Myth Exposed—Bedside Diagnosis of Deep Venous Thrombosis—Pogson and Conn 203

N

National Health Insurance Costly—Romanek 12
Neal, J. Gregory *et al*—Commitment of the Mentally Ill in Missouri 591
Nesbitt, Tom E.—Living Up To Principles—Editorial 97

New Members 46, 110, 176, 230, 294, 343, 402, 452, 507, 559, 610, 656
New MSMA Statewide Program Offers Assistance to the Impaired Physician—Special Report 95
The "No Code Blue" Issue: Missouri Is Not Massachusetts—Lampton and Winship 259
Norman, E. B., Jr.—A Pharmacist's Personal Experiences With Generic Drugs—Special Article 127

O

Obsolete and Ineffective Procedures 286
The Older Among Us—Wooldridge—Editor's Corner 469
On Hearing Aid Recommendation—Cozad, Templer and Davis 77
Operative Obstetrical Intervention as an Element in Lowering Perinatal Mortality—Ott and Ritter 84
Orbital Blowout Fracture Due To a Diving Accident—Wright, Bowen and Morgan—Case Report 487
Ott, William J. and Ritter, Hubert A.—Operative Obstetrical Intervention as an Element in Lowering Perinatal Mortality 84

P

Parnell, Denyse N. *et al*—Multiple Pulmonary Nodules—Case Report 313
Pelvic Lymphadenectomy in Prostatic Carcinoma—Ross, DePauw and Montie 23
Pemberton, L. Beaty and Crisp, N. Denny—Management of Obscure Causes of Benign Obstructive Jaundice 427
Perinephric Abscess: The University of Missouri Experience—DePauw, Montie and Ross—Case Report 429
Perry, Michael C. and Gruenwald, Richard L.—Thrombotic Thrombocytopenic Purpura 316
Pestana, Carlos—What Is Right With American Medicine—Special Article 473
Pfaller, Michael and Wray, R. Chris, Jr.—Leptospirosis and Limb Gangrene—Case Report 157
A Pharmacist's Personal Experience With Generic Drugs—Norman—Special Article 127
Photo Comment—James W. Clawson 8, 66, 124, 192, 248, 310, 356, 416, 468, 520, 578, 624
Physiologic Delay of Menarche—Fayez, Sowers and Miller—Case Report 207
Pinkerton, Joe A., Jr. and Gholkar, Vijay—Carotid Endarterectomy, 100 Consecutive Operations 585
Pogson, G. William and Conn, Robert D.—Bedside Diagnosis of Deep Venous Thrombosis—A Myth Exposed 203
Poklis, Alphonse and Gantner, George E.—Deaths Attributed to Drugs in St. Louis City and County, A Brief Survey, 1977-1978 588
A Prescription for Ailing Medical Education in America—Ackerman—Special Article 10
President's Message 37, 93, 163, 221, 281, 331, 441, 499, 539, 597, 645
Puckett, Charles L. *et al*—Remember the Allen Test 81

R

Radiographic Manifestations of Pulmonary Aspergillosis—A Review of Four Cases—Maltby 265
Rasario, Peter A. *et al*—Multiple Unusual Pulmonary Nodules—Case Report 313
Rational Use of Insulin—Klachko 270
Remember the Allen Test—Puckett, Major and Werner 81
A Review and Critique—Laetrile "Case Histories"—Yarbro 195
A Review of Four Cases—Radiographic Manifestations of Pulmonary Aspergillosis—Maltby 265
Ritter, Hubert A. and Ott, William J.—Operative Obstetrical Intervention as an Element in Lowering Perinatal Mortality 84
Romanek, Barton J.—National Health Insurance Costly 12
Ross, Gilbert, Jr. *et al*—Pelvin Lymphadenectomy in Prostatic Carcinoma 23
Ross, Gilbert, Jr. *et al*—Perinephric Abscess: The University of Missouri Experience—Case Report 429

S

Severe Hand Venous Hypertension With an End-to-Side Radiocephalic Fistula—Garvin and Codd—Case Report 210
Shannon, Reaner *et al*—Effects of Antiplatelet Drugs on Platelet Function Tests 212
Shively, Robert A.—Cutaneous Protrusion of a Sliding Compression Screw—Case Report 320
Silver, Donald and Kapsch, Donald N.—Heparin Induced Thrombocytopenia—A Life and Limb Threatening Complication of Heparin Therapy 274
"Singing Doctors" to Appear at Auxiliary Benefit Auction for AMA-ERF/MSMF 167
Sirridge, Majorie S. *et al*—Effects of Antiplatelet Drugs on Platelet Function Tests 212
Small Beginnings and Great (?) Endings—Wooldridge—Editor's Corner 125
Smith, J. Ned—Update: Irritable Bowel Syndrome 262
Sowers, James R. *et al*—Physiologic Delay of Menarche—Case Report 207
Sowers, James R. *et al*—Update on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas—Case Reports 492
Special Articles—
  The Art of Healing—Tumulty 250
  A Pharmacist's Personal Experiences with Generic Drugs—Norman 127
  A Prescription for Ailing Medical Education in America—Ackerman 10
  What Is Right With American Medicine—Pestana 473
Special Report—New MSMA Statewide Program Offers Assistance to the Impaired Physician 95
Special Review Article—Hyperthermia, A Modality of Cancer Therapy—Abadir 581
Srivisal, Somnuk *et al*—Massive Hepatic Necrosis Following Selective Arterial Embolization—Case Report 489
The State of the Nation—Wooldridge—Editor's Corner 357
Stelle, Paul *et al*—Effects of Antiplatelet Drugs on Platelet Function Tests 212
Stevens, Sue C. *et al*—Carcinoma of the Breast: The Role of Estrogen and Other Receptor Determinations 89
Stothert, Joseph C. *et al*—Massive Hepatic Necrosis Following Selective Arterial Embolization—Case Report 489

T

Templer, Jerry *et al*—On Hearing Aid Recommendation 77
Templer, Jerry *et al*—Tonsillectomy—Is It Necessary? 25
Thomas, J. Regan and Allard, J. Brad—Diagnosis and Treatment of Serous Otitis Media 479
Thrombotic Thrombocytopenic Purpura—Gruenewald and Perry 316
Through the Microscope—Wooldridge—Editor's Corner 193
Tonsillectomy—Is It Necessary?—Joseph, Davis and Templer 25
Tucker, Leslie E. *et al*—Multiple Unusual Pulmonary Nodules—Case Report 313
Tumulty, Phillip A.—The Art of Healing—Special Article 250
A Two-Year Surgical Experience—Acoustic Tumors and Other Cerebellopontine Angle Lesions—Luetje and Whittaker 482

U

Uniform Collection Service Approved for Missouri State Medical Association 445
Update: Irritable Bowel Syndrome—Smith 262
Update on Stapled Bowel Anastomosis—McGinty, Kasten, Kinder and Hunt 145
Update on the Diagnosis and Management of Prolactin-Secreting Pituitary Adenomas—Fayez, Sowers, Blanchard, Finnie and Morris—Case Reports 492
Use of a High Bulk Diet After a Small Bowel Bypass Operation for Obesity—Glass—Case Reports 34

V

Variability of Clinical Manifestations in Pheochromocytoma—Hamburger—Case Report 593
Victor, David W. *et al*—Internal Iliac Artery Aneurysm: Unusual Cause of Lower Abdominal and Pelvic Symptoms—Case Reports 424

W

Werner, Richard *et al*—Remember the Allen Test 81
What Is Right With American Medicine—Pestana—Special Article 473
Whence?—Wooldridge—Editor's Corner 579
White, Wilma L. *et al*—Carcinoma of the Breast: The Role of Estrogen and Other Receptor Determinations 89
Whittaker, C. Keith and Luetje, Charles M.—Acoustic Tumors and Other Cerebellopontine Angle Lesions—A Two-Year Surgical Experience 482
Willoughby, T. Lee *et al*—Effects of Antiplatelet Drugs on Platelet Function Tests 212
Winship, Daniel H. and Lampton, Lawrence M.—The "No Code Blue" Issue: Missouri Is Not Massachusetts 259
Women Physicians Invited to AMWA Meeting in St. Louis 167
Wooldridge, Wilfred E.—Editor's Corner
  Editor's Corner 9
  All in a Day's Work 67
  All in a Day's Work 311
  And a Happy New Year, Too! 625
  Aphorisms 521
  Beyond Aesop 249
  A Comment on CME 417
  The Older Among Us 469
  Small Beginnings and Great (?) Endings 125
  The State of the Nation 357
  Through the Microscope 193
  Whence? 579
Wray, R. Chris, Jr. and Pfaller, Michael—Leptospirosis and Limb Gangrene—Case Report 157
Wright, Harry *et al*—Orbital Blowout Fracture Due To a Diving Accident—Case Report 487

Y

Yarbro, John W.—Laetrile "Case Histories"—A Review and Critique 195

INDEX TO ADVERTISERS

They Help Make Missouri Medicine *Possible*

Burroughs Wellcome Co. .... Insert (622-623)
Ellis Fischel State Cancer Hospital Symposium 622
Goetz-Niemer Co. 648
Fred S. James & Co. of Missouri, Inc. 644
Stanley H. Kaplan Educational Center 659
K. C. Southwest Clinical Society 655
Eli Lilly & Company 626
Mead Johnson Pharmaceutical Division . Insert (658-659)
Medical Defense Associates, Ltd. 651
Medical Protective Company 658
Merck Sharp & Dohme 622
MOMEDICO 618
Munns Medical Supply 659
Roche Laboratories 619, 667, 668
SmithKline Diagnostics 623
Smith, Kline & French .... Insert (622-623)

CLASSIFIED ADS

CLASSIFIED ADVERTISING INFORMATION

Rates: $5 per insertion for 50 words or less for members and $10 per insertion for 50 words or less for nonmembers, with an additional 10c per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, Jefferson City 65101.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count box numbers as five words.

Box Numbers—Advertisers using box numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal box number, address letters as follows: Box (insert number), c/o Missouri State Medical Association, 113 Madison, Jefferson City, Mo. 65101.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

PRACTICE FOR SALE — Family practice, three years old. Rapidly growing. Excellent potential. South Kansas City. Leaving for residency. $45,000. Reply to Box CA-454, Missouri State Medical Association, P.O. Box 1028, Jefferson City, Mo. 65102.

ST. LOUIS — EMERGENCY MEDICINE work available Monday-Friday days only; full time or part time; paid professional liability; flexible schedule; Missouri license required. Call PPG's Laury Kamp at 314-878-2280.

ST. LOUIS OFFICE — Fully equipped medical suite ideally located off major highway in Clayton area. 1,100 sq. ft. completely furnished with all new medical and office equipment. Excellent lab and x-ray in building. Easy parking. Available July, 1980. Call (314) 863-3755.

WHAT IS YOUR PRACTICE WORTH? — Most medical practices represent a lifetime investment, yet few are ever sold for their value as a going business. Health Resources provides merger brokerage services to medical practices and hospitals. If you plan to retire or cut back your practice in the next five years, now is the time to plan for a successful sale — when your practice is at its optimum. For more information, call us in confidence: Health Resources, Ltd., River Road Professional Building, Box 12220, Kansas City, Mo. 64152. (816) 587-0920.

WANTED PHYSICIAN — For correctional institution. 30- to 40-hour work week. Fringe benefits. Salary negotiable. Contact Warden Donald Wyrick, P.O. Box 236, Jefferson City, Missouri 65102 or call 314-751-3224.

PEDIATRICIAN — Needed by 10-man incorporated, multi-specialty group, 60 miles south of St. Louis. Clean city of 10,000 with all churches, AAA schools, half mile from 130-bed hospital. Five-county drawing area with 50,000 active records. Competitive salary, excellent fringe benefits. Contact J. G. Hirsch, Administrator, Medical Arts Clinic, 301 West Liberty, Farmington, Missouri 63640.

ST. LOUIS OFFICE — Fully equipped medical suite ideally located off major highway in Clayton area. 1,100 sq. ft. completely furnished with all new medical and office equipment. Excellent lab and x-ray in building. Easy parking. Available July, 1980. Call 314-863-3755.

HLA TESTING — HLA Testing for disease association studies, HLA B-27, HLA B-28, etc. Available from the Midwest Organ Bank Laboratories. For more information, call (816) 931-6353. Midwest Organ Bank Laboratories, 305 W. 43rd Street, Kansas City, Mo. 64111.

For MSMA Impaired Physician Program Assistance,

Call 314-636-5744

24-Hour Telephone Answering Service. Calls Are Confidential.

Missouri Medicine in Review

LEO H. POLLOCK, M.D.

FORTY YEARS AGO

Only a few weeks after the meeting of the Missouri State Medical Association a year ago, Dr. Ellis Fischel met an untimely death while on the way to Jefferson City in the interests of the Cancer Commission.

The year 1939 marks the century milestone traversed by the University of Missouri. In 1839, the State of Missouri had been in the Union 18 years, having been admitted as a compromise between the opposing forces in regard to the slavery question. On Feb. 11, 1839, the Tenth General Assembly passed the Geyer Act which provided for the establishment of a "seminary of learning." This was the birth of the University of Missouri.

When it was decided to locate the university in the center of the state, there was feverish bidding by the central counties. Boone County offered the largest bonus, $117,500 for its location at Columbia, its county seat. The cornerstone of the first building was laid on July 4, 1840. The student body in 1843 numbered 73.

The Phelps-Crawford County Medical Society held a dedication ceremony for the Nelle McFarland Memorial Hospital in Rolla on November 13. Dr. A. A. Drake of Rolla, president of the Society, was toastmaster at a dinner at Bell's Cafe which was attended by 70 members.

TWENTY-FIVE YEARS AGO

The budget request for operation of Missouri University's four-year medical school for the 1955-1957 biennium was $4,750,760.

James H. Sweiger, M.D., Maysville's only active physician, has enlisted in the Army, leaving the city without any doctor.

A community reception was held in Windsor in honor of R. J. Jennings, M.D., who has completed 50 years in the practice of medicine.

Rehearsals of the St. Louis Physician's Orchestra are being held at the St. Louis Institute of Music every Monday evening.

Charles A. Worley, M.D., Sweet Springs, was injured in a car wreck in Kansas City in the late summer.

The Southwest Missouri Chapter of the American College of Surgeons has elected Springfield's Dr. F. T. H'Doubler, Sr. as president and Dr. Durward G. Hall as vice-president.

The annual pilgrimage to the grave of Dr. William Beaumont, which is sponsored by the St. Louis Medical Society, was made on November 21. St. Louis Circuit Court Judge Robert L. Aronson delivered a short address.

TEN YEARS AGO

The new radiology center at St. Louis County Hospital was opened officially on October 14. Dr. Samuel J. Merenda is director of the department, Dr. Robert Kingsland is chief of staff and Dr. R. O. Muether is director of medical education.

Dr. Hugh V. Ashley, Jr. has been appointed to fill a vacancy on the Cape Girardeau Board of Education. He formerly served three terms on the school board.

Dr. Henry E. Oppenheimer, Clayton, served as moderator for the Second Annual Symposium on Diabetes at St. John's Mercy Hospital in St. Louis on October 24.

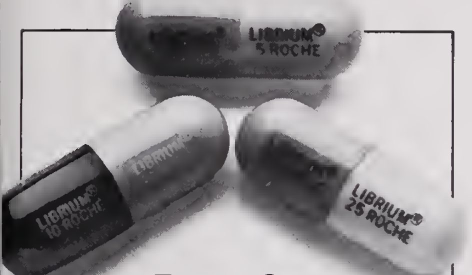
Dr. J. J. Royce, Sarcoxie, was installed as Worthy Patron of the Grand Chapter of Missouri, Order of the Eastern Star in October.

Dr. Watkins Andrew Broyles, Bethany, was formally inducted into the County's Hall of Fame in October by the Harrison County Historical Society.

Forty-eight members attended the annual election meeting of the Buchanan County Medical Society on October 1 at the new Ramada Inn in St. Joseph. Dr. John L. Mothershead, president, presided at the meeting which followed the dinner. Newly elected officers are president-elect, Dr. Sharon E. Waggoner; vice-president, Dr. Lawrence H. Pifer; secretary, Dr. E. F. Butler; and treasurer, Dr. Robert W. Kieber for his 17th consecutive term in this office.

Librium®

chlordiazepoxide HCl/Roche



5 mg, 10 mg, 25 mg capsules

- ☐ Proven antianxiety performance
- ☐ An unsurpassed safety record
- ☐ Predictable patient response
- ☐ Minimal effect on mental acuity at recommended doses
- ☐ Minimal interference with many primary medications, such as antacids, anticholinergics, diuretics, cardiac glycosides and antihypertensive agents

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. Oral—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

synonymous with relief of anxiety

ROCHE

Roche Products Inc.
Manati, Puerto Rico 00701

Please see following page.

Librium® Ⓒ IV

chlordiazepoxide HCl/Roche

5 mg, 10 mg, 25 mg capsules

Philadelphia Librar
19 South 22nd St.
Philadelphia, PA 191

4 3729
synonymous
with relief of anxiety
ROCHE

Please see preceding page for a summary of product information.

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

This Book is due on the last date stamped below. No further preliminary notice will be sent. Requests for renewals must be made on or before the date of expiration.

DUE	DUE

ged for
book is
orization.